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JANUARY 1958 25c

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Jack's Purple Rage
see page 12

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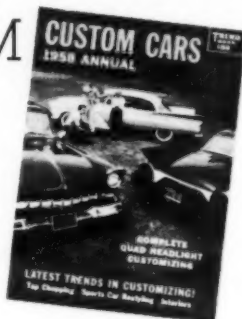
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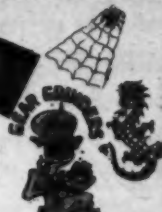
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FEATURES



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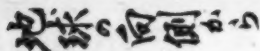
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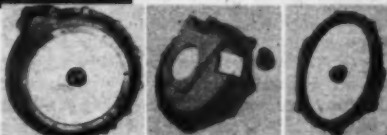
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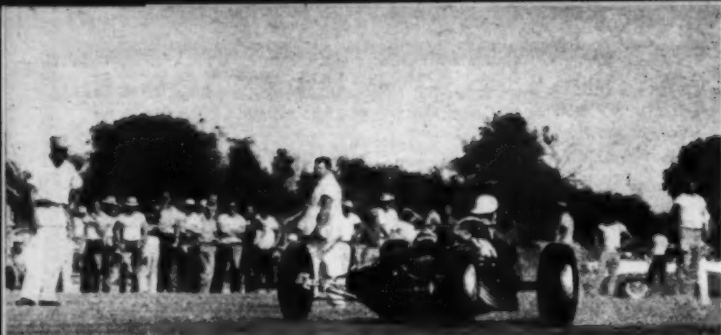
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DEALER INQUIRIES INVITED



A GREAT DEAL OF WATER has flowed beneath the automotive bridge during the course of the past year. The new '57 cars that everyone was "gee whizzing" about twelve months ago are old hat, and it's the '58's that are being "gee whizzed" over. Custom trends that were in the blossoming stage have either settled down to a steady patter or died out altogether. Millions of fans have gawked at hundreds of Rods and Customs during the car shows of 1957, and thousands have gone home solemnly promising to take up the customizers torch or the rodders boring bar—a few have actually done it, thus becoming "doers" instead of "want-to-doers". Gimmicky automotive accessories from a year back are gathering dust on suppliers shelves, while newer items have come into the fore. And, well ... so it goes each and every year. Next year's outcome along these lines can be pretty accurately predicted using last year as a yardstick. But when it comes right down to predicting names, dates, places and figures—that's a bit more difficult. But it was early last year that we looked ahead into then-new 1957 and; as it turns out, saw pretty well what was in the offing for the Rod and Custom world.

Last year we said; there would be an upswing in customizing (there was), that quad headlights would become the torch-slingers craze (it was, sparked by the lamps on the R & C Dream Truck), that fins would be added to older non-finned customs, and that the fins would be stripped from the newer cars that came stock with them (a review of the 12 past issues will prove this), that 12 records would fall at the '57 Bonneville meet (12 records fell), that the average speed these records would be broken by would be 8 miles an hour (we goofed, 15.7 mph was the average), and that the Bonneville Streamliner record would climb to 263 mph (the new record is a little higher at 266 mph).

We didn't think that drag strip times would go much over 160 mph (167 is the recognized top speed), but we looked for e.t.'s to drop down around 9 secs. for the faster cars (correct, and a few have even been under this). And we looked for fewer, but more powerful car shows (right again). And what does '58 hold? Surprisingly though it might seem, we'll let our predictions stand pat. The same customizing crazes will continue, we'll guess, the same number of speed records will be broken by the same (8 mph) speed, shows will be larger but fewer, and so forth. Tune in each month and let's see how things progress as predicted, and 12 months hence we'll see how we stack up in the crystal ball-gazing department. ●

S. M.

ROD & CUSTOM

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LETTERS

TO THE
EDITORS

EDSEL UNDER FIRE

Following are excerpts from just a few of the letters we received, and still are receiving, as prompted by our "Much Ado About Nothing" Edsel article appearing in the October issue.

Why you would publish such an article is a mystery to me. The way the Edsel was criticized was awful. I hope I'll never be guilty of buying another Rod & Custom. You're far and away too GM partial!

James Jenkins Oxford, Alabama

Where'd you run into those characters that wrote the Edsel article? I'll admit the car might not be "all new", but it's far from being a "...hashed up, warmed over, slightly restyled Ford or Merc". As for Henning & Ritch's interpretation of what the Edsel should have looked like; E-e-e-s-sh! Rick White Evanston, Illinois

If Messrs. Henning & Ritch keep up the good work, they're going to drive Detroit crazy.

Tom Ruse Bristow, Oklahoma

Afraid there wouldn't be 200,000 new Edsels sold for '58 if your Henning and Ritch were in the company's styling department. Outside of their version of dual lights for the Edsel, they showed little on their version that was new. Certainly the Plymouth chrome, Buick wheel covers and Olds grille displayed little originality.

Kenneth Halstead Middleport, N. Y.

Certainly enjoyed your article about the Edsel. Ford built this car up to be something really great, but it sure has been a disappointment. Glad your artists have customized it to become more of a "car" than what it was formerly. K. L. Moore FPO San Francisco, Calif.

I imagine your Edsel story will raise a hue and cry that will be long in sub-
(continued on next page)

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MORE LETTERS

continued from preceding page

siding, and you no doubt will be receiving a lot of correspondence, for months to come, on the subject. But permit me to inject my two bits worth; it took nerve to stand against Detroit, as you fellows have, and at least R & C is first for offering an unbiased opinion. Hats off, too, for showing us an altered Edsel the same day the stock car was introduced.

Bill White Lake Hughes, Calif.

• And so they go. The majority of letters on the "E" subject overlooked an important fact; H & R's quarrel wasn't so much with the Edsel itself, but with the advertising and promotion departments who hailed the new car as they did. The intent, primarily, behind the story "Much Ado About Nothing" was to show that the people who write the advertising copy don't necessarily know anything at all about cars. In fact, it is doubtful if they had even seen the car, or even a sketch of it, when they sat down at their typewriters with orders to turn out something "smashing". The car itself isn't too bad, and our customized version of it was right in line with what we annually do with all the more popular new creations.

CAMPER'S ROADSTER

Just received the November issue of R & C, which is always well received up here. Especially enjoyed "The '32 Today". Being a Deuce lover from 'way back, tears really came to my eyes when, on page 44, I saw my trusty old roadster staring at me. Upon reading the accompanying story, I couldn't resist writing to clarify a few facts. The car was pure junk when I started on it. All the body work, channeling, the grille, fender work and painting was done here at home. The color, then, was Oxford maroon. It was my wife and I, not a custom show, who welded in the deck lid.

In 1952 we took the car to the Oakland Roadster Show where it won first place for beauty and construction.

The car has changed hands many times over the past five years, and I'm

sure each successive owner has added something more to its makeup, so if you'd pass this information along to the present owner, Frank Chester, it might help to keep the story of its origin intact for future purchasers.

Gene Crosby

Paradise Camp,
Bishop, Calif.

AUTORAMA COMING UP

The Conquerors of Lansing, Michigan, have announced the dates for their 2nd Annual Rod & Custom Autorama. February 14th, 15th and 16th are the dates, and the new Lansing Civic Center is the place. Lots of trophies for many classes are promised. Further information will be yours by contacting Sol Steadman, President of Conquerors, Inc., at 1610 Inverness, Lansing, Michigan, right away.

CARTOON CONTEST WINNERS

Here are the final winners of the Rod & Custom Cartoon Contest series. Response was terrific and the number of entries who got poetic about "glass" was staggering.

1. David Green, Shelbyville, Indiana
"Not playin' it lazy—just playin' smart.
Never just say, TAPKIT—always say Taylor & Art!"
2. Ralph Straughter, Beaumont, Texas
"Say, Dad, it 'ppears to me that you've got lots of trouble,
So why don't you do like me—get TAPKIT on the double!"
3. Michael Kosloski, Chincoteague, Virginia
"Hey, Joe, forget the lead, that old heap is dead.
But with a TAPKIT C 25 you could make it come alive."

REWARD

What's become of R & C's pet 'Bird?

The Thunderbird being modified as per reader's requests has been conspicuous by its absence. Regular readers will be rewarded to find out the reason for the disappearance in the February issue

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 29, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT AND CIRCULATION OF

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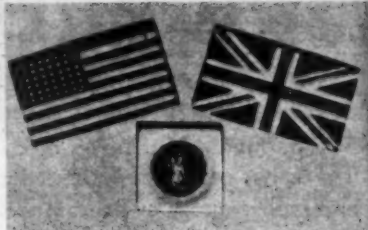
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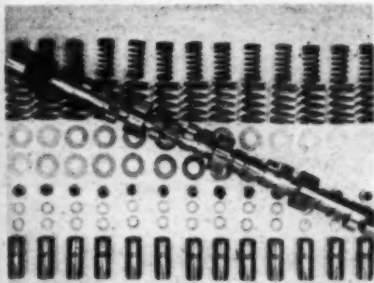
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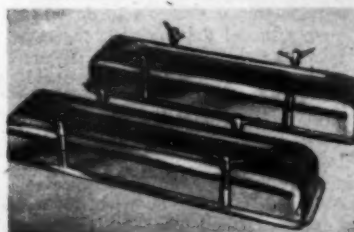
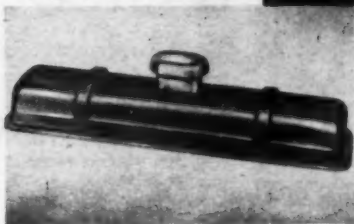
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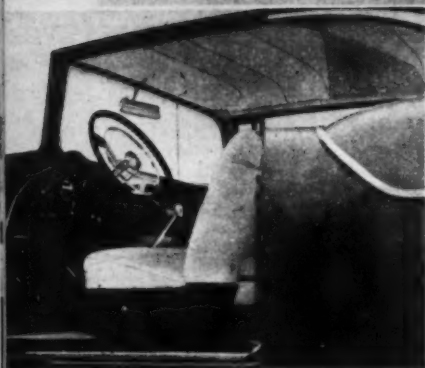
Alden Jay

P. O. Box 19438

Los Angeles 19, Calif.



automart



The headliner, seats and door panels are all done in a pink and white pattern. Note the floorshift lever.



THE GOAL of the customizer is to build a completely different car that will reflect his individuality. Sometimes this is difficult to do when you own a model that attracts the majority of the car buying public. When Jack Curry of Medford, Oregon, decided to go the custom route he wanted to make sure he didn't fall into this category. Back in '55 when Jack was looking over the field of new iron he decided the Pontiac offered the greatest challenge since little or nothing had been done with that line.

The car decided upon was a Chief-tain hardtop. The body was left in stock condition at first, while Jack worked over the mill and chassis. The 236 inch engine was bored out to 300 cubes, balanced and fitted with a set of J.E. buckets, an Isky E4 cam kit and Mallory ignition. The heads were milled after being ported and polished. A four pot manifold mounting four 97's was bolted on along with a set of headers. The reworked mill increased the performance greatly, but proved to

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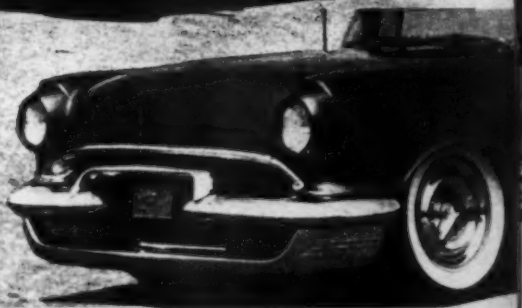
jack's purple rage

Oregon's pride is a Medford Indian



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Hardest job on whole car was rid-
ding hood of skunk-like stripes.
Fiberglass was used to fill grooves.



TOM

JANUARY, 1959

Jack's purple rage continued

be a wee bit tough on the hydro gear box. A '37 LaSalle box was installed at this time with good results.

Jack, satisfied with the way his iron would motate, began working on the chassis. The front spindles were reversed and a set of '52 Pontiac coil springs installed. This dropped the front end down to within 1½ inches of the ground. To lower the back end an equal amount the frame was C'd at the rear kickups and the spring eyes reversed. This still left the back too high so a set of 4 inch blocks were also installed. Such drastic lowering placed the rear wheels too high in the wheel wells giving the rear of the car an awkward appearance. The wheel openings were cut out to remedy this and the rear openings were flared and tapered to match the front openings.

Encouraged by the neat appearance of the lowered and repowered "Indian,"

Jack started work on the car's hood. Smoothing the channels in the hood proved to be a major task. A great many combinations of lead, putty and plastic were tried before a plastic was found which would hold permanently. The filled channels were then smoothed and sanded to match the finish of the body metal.

When the bumper-grille was removed from the front of the car the huge, gaping hole left Jack doubtful that any stock components would fill the space gracefully. Rather than face extensive modifications with sheet stock he decided to use the raised center bar from the rear bumper to join the front bumper halves together. The space under the bar was filled by mounting a "Kustom" plaque in a floating mount.

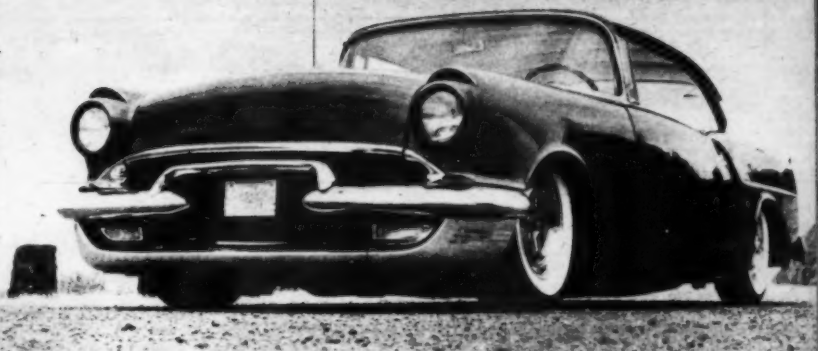
Photos by Peter Sakulac



With the help of Gene Cargill of Beck's Automotive in Portland, Jack frenched in the headlights using '52 Merc rings. The stock side trim was removed, shortened and remounted on the rear quarters only. Work was then begun on the taillights. The striped rear humps were cut away and the openings filled with sheet stock. '55 Chrysler taillights were then molded into the fender edges. The smooth, new

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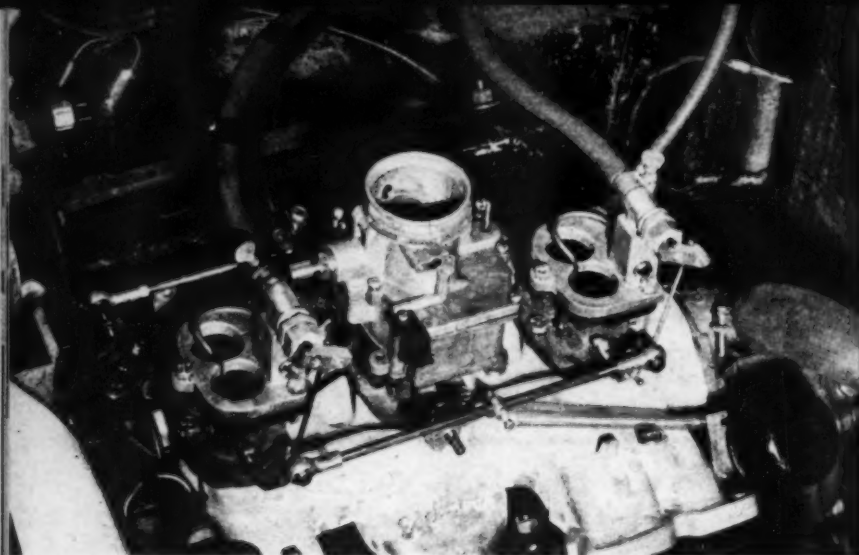
taillights added greatly to the appearance of the car. To further the low, smooth look the Pontiac bumper was removed and a '64 Plymouth Belvedere bumper installed. The body was right at the stage where it looked different, but not radically so. And this was just what Jack wanted.

The car was turned over to Lee Hetzler's Hollywood Auto Upholstery in Portland for the interior. Lee de-

signed a diamond pattern which was done in pink glitter material and white vinyl leather. The carpets were made pink and black for contrast. When Lee finished the last kick pad the car was painted "Frozen Grape" to finish it off.

Curry's Pontiac may not be the most radical custom car on the street, but it finds little to compete with it for originality. It's a "Chief" among all the other Indians. ●

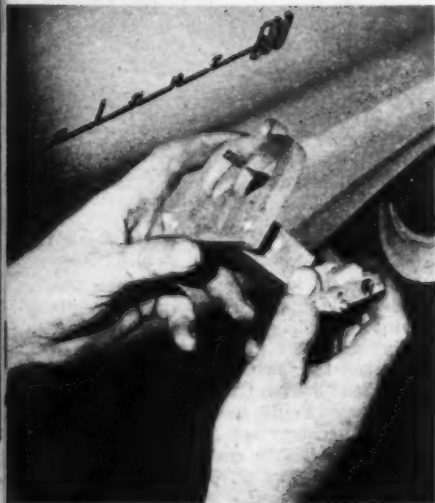
TOM



metered fuel

unearthing the possibilities of a new low-cost

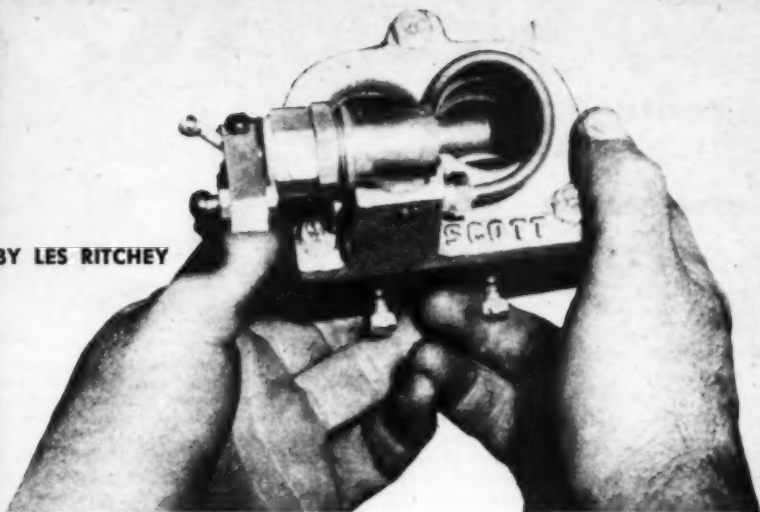
photos/lynn



RECENTLY, the existence of a new product sent your editors into a mad scramble to obtain units for an unbiased series of tests. The Scott metered fuel system has been developed over a period of several years by Milford Scott, an engineer currently employed by a missiles manufacturer. Not anxious to set the world on fire, Mr. Scott has been quietly perfecting and simplifying his creation until at last it is time for the unveiling. Les Ritchey, author of a series on hopping up the Ford overheads (R & C December '56 through May '57) and top tuner at Covina, California's Performance Associates, has performed an exploratory into the little fuel squirter and came up with some exciting revelations. In an effort to get the word out fast, we are putting the first part of Les' findings into this early issue. Rainy skies postponed last minute $\frac{1}{4}$ mile tests which will appear in a subsequent article along with further experiments on varied usages.

ROD & CUSTOM

BY LES RITCHEY



el checkout part I

fuel injection system

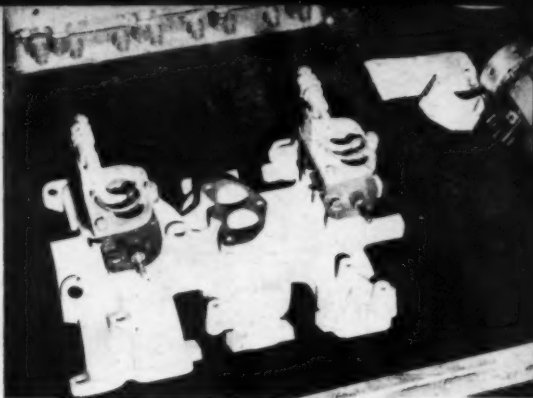
FUEL INJECTION is getting to be a household word. It has been written about, preached, argued, run down, run up and run out and yet, in a true sense, one that is practical for everyday use has yet to be put on the market. Along this theme goes the great cost and complexities of a true fuel injection. But now available is the very simple and low cost set up which we will try to explain here. For the want of a better name we'll call Scott's unit a metered fuel system, although it is in my opinion as true an injector as we have on the market today. It is simplicity in itself and it brings the classic statement to mind, "Well, why didn't I think of that?" Nonetheless it is a very well engineered set up and it is plain to see that many hours of thought and theory have been utilized.

The system makes use of a Stromberg base which houses only the butterflies and their shaft. The unit itself is a one piece casting of aluminum which houses an in-and-out needle seat as-

sembly, in this case acting as a float chamber. It can be adjusted for the right amount of fuel at all given rpm. The needle is worked in and out by the acceleration pump arm in the same position as on the standard Stromberg 97's. For any given throttle movement the needle is taken away from its seat and opens the orifice through a Stromberg jet to the dump tube. The wider the throttles open the more fuel supply to the dump tube, always being metered by the jet. This casting is bolted right to the base in the existing hole positions, of course using the regular upper base gasket. The dump tube is so positioned as to be dead center of the stock relief for the venturi castings in base. This position actually forces an equal amount of fuel out into the throttle bores at right angles, where the velocity of the incoming air picks it up and mixes it on the way to the cylinder. Because of this angle, fuel is sprayed the complete diameter of the
(continued)

metered fuel checkout

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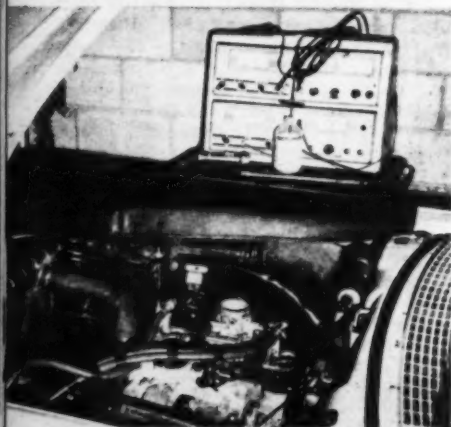


Scott injectors are used in place of carburetors on ends of triple jet manifold. 312 cu. in. Ford ohv engine was used in tests, showed 33 hp increase over single four-throat this set up replaced. Nor had

throttle bores, instead of just one side or the other. *This alone could be a big factor in increased performance.* At this time it might be good to bring out the possibilities of this unit with a blower. Due to the position of the dump tube and non-existent venturi restrictions a much bigger charge could be taken into the cylinder by the blower pressure. As we said, the position of the dump tube is ideal because it is dumping in the direction of air flow

and would not be trying to get into the butterfly openings against solid blower pressure. This has been a big problem with blowers today. The unit is engineered to work from 3 pounds fuel pressure up, but in my opinion 6 to 7 pounds would be ideal. The minute the needle seat opens, fuel pressure starts the liquid on its way to the dump tube and at this time you had better be ready to run. Because of the limited time we have had in experimentation with this set-up, we can not give you data at the present time on how this would work using it on the street. The unit has no idle circuit in it except that the needle seat could be adjusted to dribble with a very slight throttle opening. I think this might work alright but until we have time to experiment further it's best to leave it as is.

Now to find out how it really works. On our only complete experiments to date we used two of these units on an Edelbrock three carburetor manifold in place of the two outside carburetors, hooked up with progressive throttle linkage. The center carburetor is the type Stromberg which was used on the '40-'42 Buick. We selected this carburetor because it has larger venturi than the regular 97 and also worked the right way for ease of throttle hook up. The center carb opened halfway and from there the two Scotts were



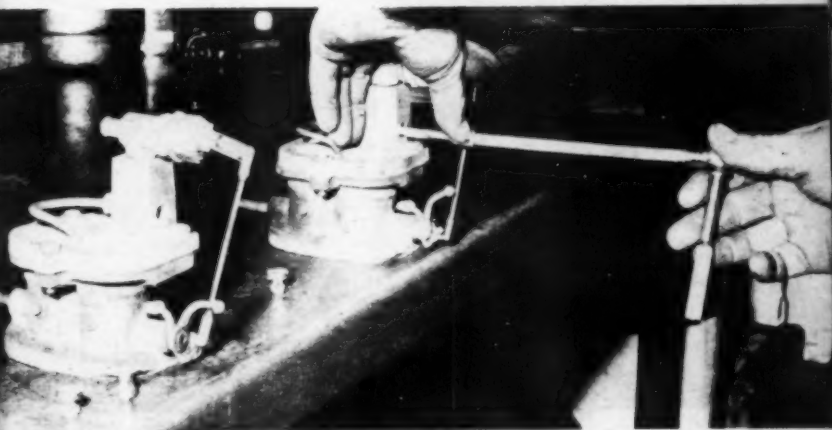
Buick type Stromberg carburetor is used in the center. This model has a larger venturi area than the '97's. Linkage hook-up is progressive.

actuated quickly. Let me say here and now that before we even knew whether they were good, bad or indifferent the very potent sound was enough to sell the onlookers. The fuel pump was built to put out a constant 7 pounds of pressure at 4000 rpm. The car was put on the dyno and run for a mixture test. It was found that the center carburetor had to be rich in order for the Scott units to come in "clean," so we ended up with #52 jets in the center carburetor in 48's in the Scott units. This set up, as is, showed a 35 hp increase at 4000 rpm's over a single four barrel set up and a 5 mph speed increase in the quarter mile time. Being fair with the units, though, I will say we had no time to experiment on anything else the day it was run at the strip because of threatening weather and plug trouble which had nothing to do with the units. The engine performed very well on the street and was extremely clean burning, which bears out facts we've been aware of for some time. For example, on multiple carburetion systems installed with all circuits in working condition and a good

overlap cam installed, the power circuits on most carburetors are brought into effect from 7 to 9 inches of vacuum. You can see what this would do on some of the street jobs for an extremely overrich mixture, when actually all you need is a correctly metered power circuit or a main meter circuit only. It is surprising what this change alone does for performance on a triple set up.

It's actually exciting to see these units available. In my opinion it opens all kinds of roads for increased performance and experimentation which will be very rewarding. These units are priced to fit most people's hop up budget and are worth every penny of, so you can't say the manufacturer of these units has left the "limited funds group" out in the cold.

One of the most impressive increases in these experiments came at the top end of the rpm range. A 312 cu. in. Ford engine was used with an Iskenderian E-2 cam. At 5000 rpm the pull of this engine before the Scott units were installed left something to be desired — it would go farther but was
(continued)



Stromberg jet is used for final metering before fuel enters dump tube. Stock carburetor plug seals off access to jet. Side location makes snap job of formerly laborious task of rejetting. Carburetor base casting from 97 provides throttle and metering valve control, eases carb to injector switches.

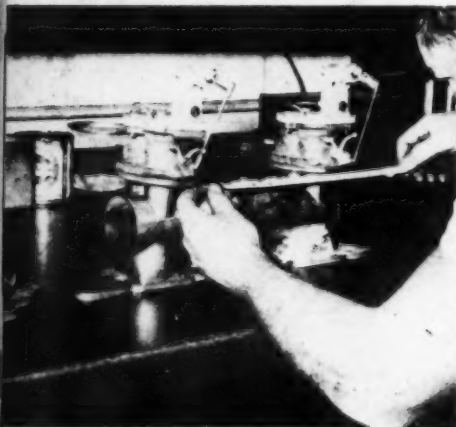
metered fuel checkout

continued

becoming mighty flat. When the Scott units were installed \$300 was attained and so quick your first thought was to get off the throttle. This was very impressive and could make a real bear out of almost any engine.

In conclusion I would like to say, we will be delving much deeper into Mr. Scott's creation, for I think it has a great deal to offer to the everyday ordinary rodder. Now, boys, you've got something to play with. See what you can do! You won't be sorry! ●

Interested readers may order the new Scott Injector which is now in limited production by contacting Scott Engineering P. O. Box 944, Santa Monica, California. All units at this time are available only through the inventor. Price has been established at \$24.95 per unit, cheaper than a new carburetor.

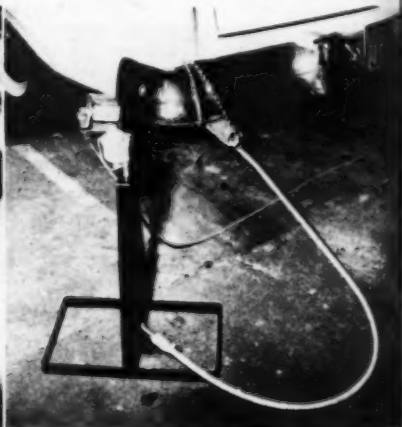


A hint of what's to come is seen as author Les Ritchey measures up the parts of a log manifold kit prior to welding. Four of the Scott units will be used with a supercharger. Look for reports in forthcoming Part II containing other tests.

20



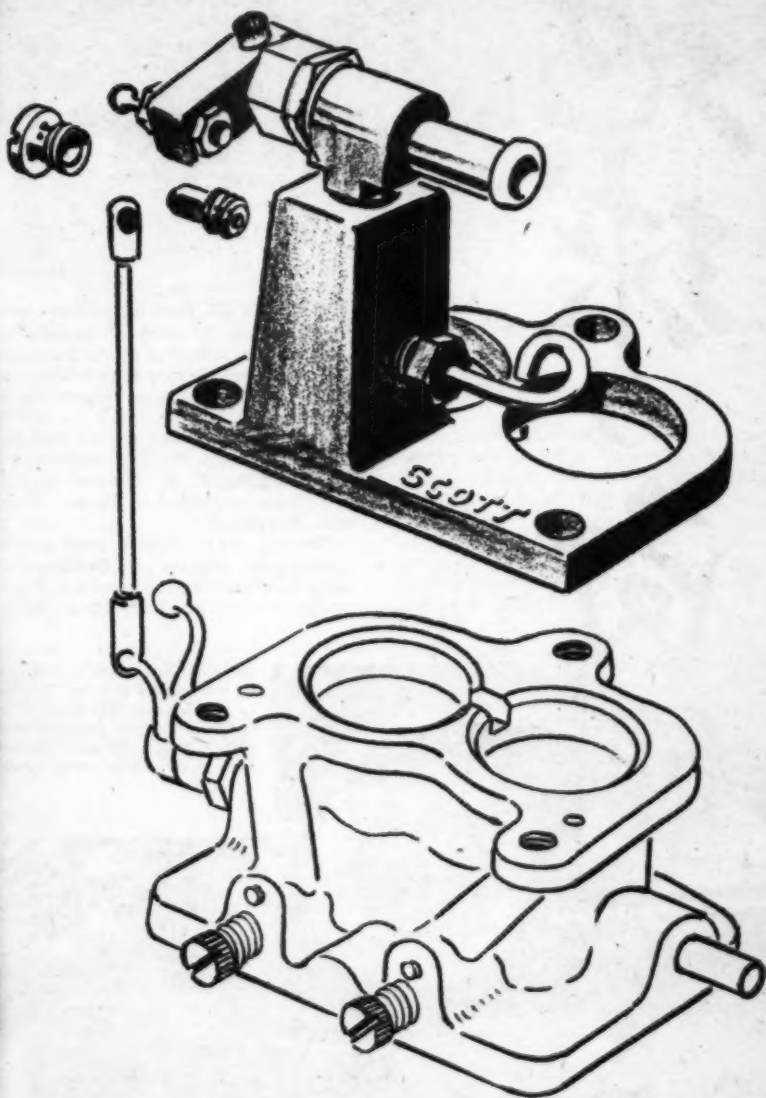
Accurate data on all aspects of fuel metering is available through the use of expensive equipment. Shop Rancho was test bed for the injector-equipped engine. The dyno rollers really went ape when the injectors cut in.



Mixture analyzer used in conjunction with chassis dyno assures that the jetting is on the money through entire range of operation. Exhaust gases put into this device are then converted to accurate readings on panel gauge.

MOD & CUSTOM

Close-
all ste
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Close-up sketch shows injector and relationship to carburetor base. Metering valve features quality all stainless steel critical parts, thus guaranteeing long life for unit as well as precision metering.

JANUARY, 1958

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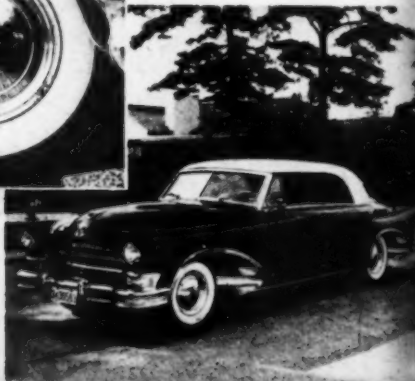
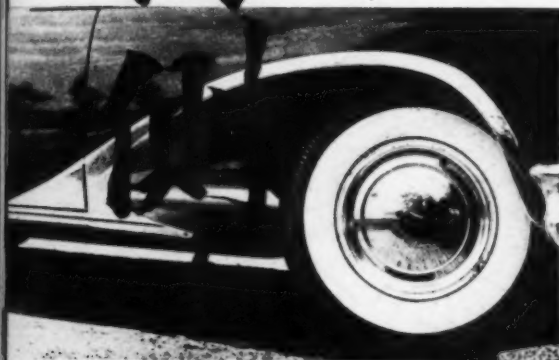


DON'T LET that title throw you. It's just our way of introducing you to one of the most unusual customs we've run across in a long while. And the story behind it is as unusual as the car itself.

The car in question is a '51 Chrysler Imperial Newport. The owners are Capt. and Mrs. O. V. Colvin of the U.S. Air Force, stationed in Japan. Here's what happened.

The car was purchased, used, in 1953 in Gulfport, Mississippi. Captain Colvin was subsequently shipped to Japan and he brought his car and family with

Beautiful metal work is displayed on this restyled Chrysler, especially in the wheel cutouts. It is unfortunate that the design of these cutouts is not in harmony with balance of car, hence losing appeal.



Photos by John Lindsey



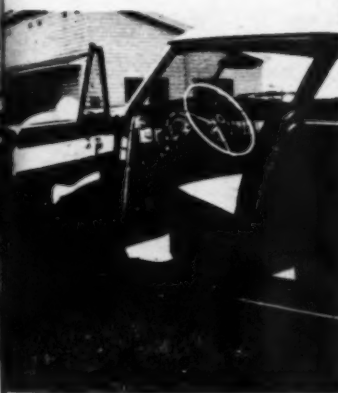
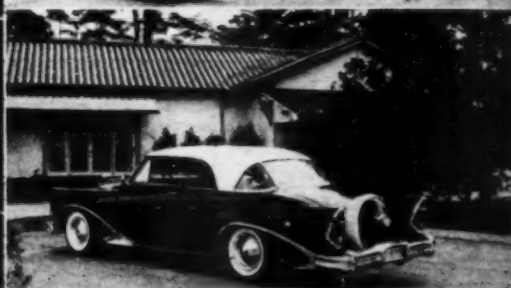
him. Long wanting to own a really distinctive car, Captain Colvin took it to an agency in Nagoya where he convinced bodyman Ikeda Tomi to duplicate on the car, ideas that had been sketched earlier.

Of course, customizing is unheard of in Japan, so the work was long in being completed, but the craftsmanship surpasses by far anything that the Captain has ever seen here or abroad. All alterations embodied the use of new material, rather than the addition of this or that from another car. Sheet metal, $\frac{1}{8}$ " steel rod and stainless steel were all involved.

Questionable perhaps to us, but of eye-catching beauty to enthusiasts in far-off Japan is the Continental kit. None are available in Japan so Captain Colvin had to sketch one up for Tomi, and he consequently had only this drawing to go by as he worked with sheet metal and light angle iron. Nestled between the upswept, extended rear fenders, the exposed spare appears to "belong" rather than as an afterthought.

Of extreme interest to us in this country; total cost for all metal work, chrome plating and flawlessly smooth paint job; \$400.00! ●

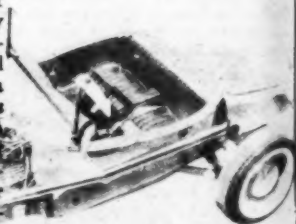
Restyled rear-end of the Chrysler has a similar appearance to the 1956 "Swept Wing" Dodge. The headlights are "French hooded" and the fender appears to sweep up toward the headlight hood but is actually an unintentional optical illusion.



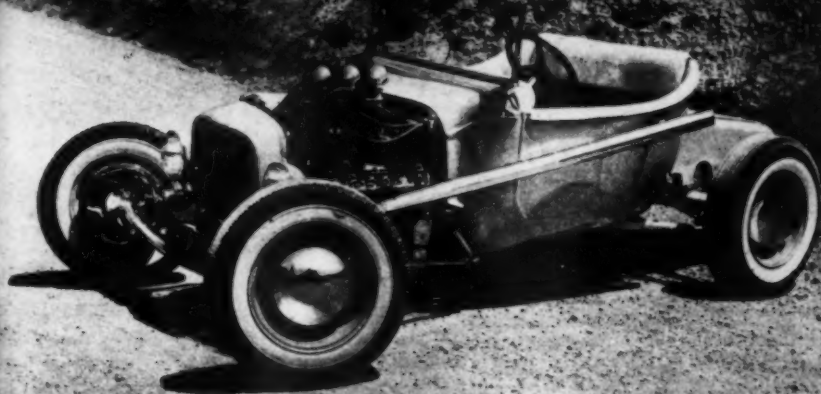


how'll you h

FAR TOO many roadster enthusiasts have lamented the disappearance of salvageable T bodies without searching further afield for available material of another make. Since eager fans across the country have, in the past several years, put most of the discovered bodies atop a set of rails and shoved ahead of the narrow firewall anything from a 4-barrel to a deep-breathing 400-inch V8, the trend in rods has been toward coupes and sedans. But there remains an untapped source of bodies for those desirous of having the wind blow through their hair and the rain — during inclement weather — beat against their faces. For one, here is a nifty li'l '21 Dodge; shown for comparison with the former king of roadster bodies — the '24 T. And the Dodge dresses up real cute, too. Naturally, it doesn't have the same design flair or the pert look of Henry's greatest masterpiece, but it does have features in its favor which could cause it to outshine its rival of more than three decades ago. Which do you like? ●



photos { Dodge by Lawrence
Ford by Burnley



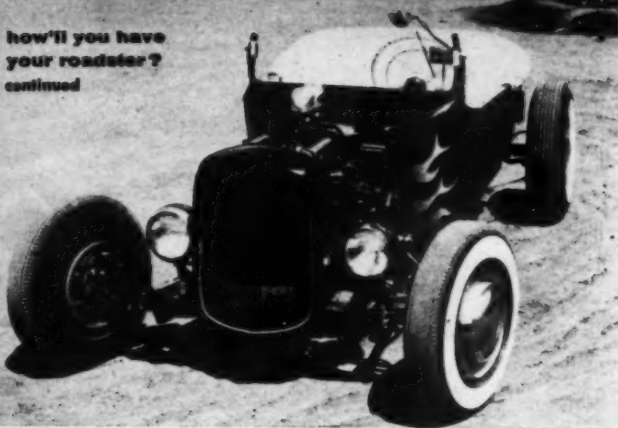
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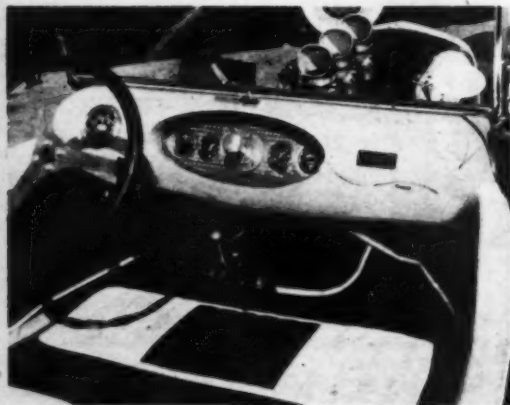
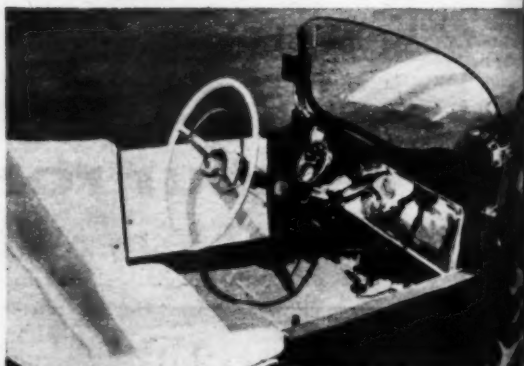
Shelly Feinberg's "Pink Chariot" (left above), is a good example of seldom-seen T-bodied street roadster. In contrast, to right, is Ray Ordas' "Daring Dodge" which boasts style and lines not unlike the previously popular Ford. Dwindling supply of T bodies — due to popularity — has moved enthusiasts to seek out other makes of cars from the '20's era with Dodge being best.

how'll you have
your roadster?
continued

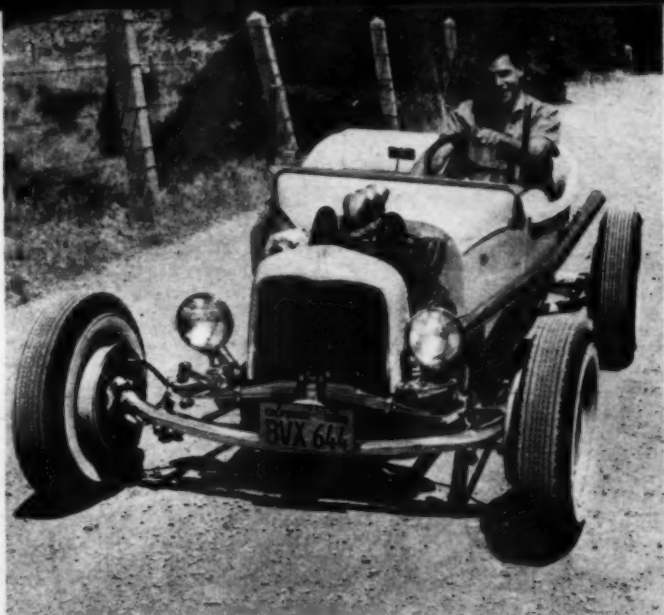


This view of the neat Dodge body could even pass as a T were it not for the unusual windshield posts — but even so, many die-hard Ford fans have been fooled. Owner Ordas has stuck to the ever-popular S-W gauges for instrumentation.

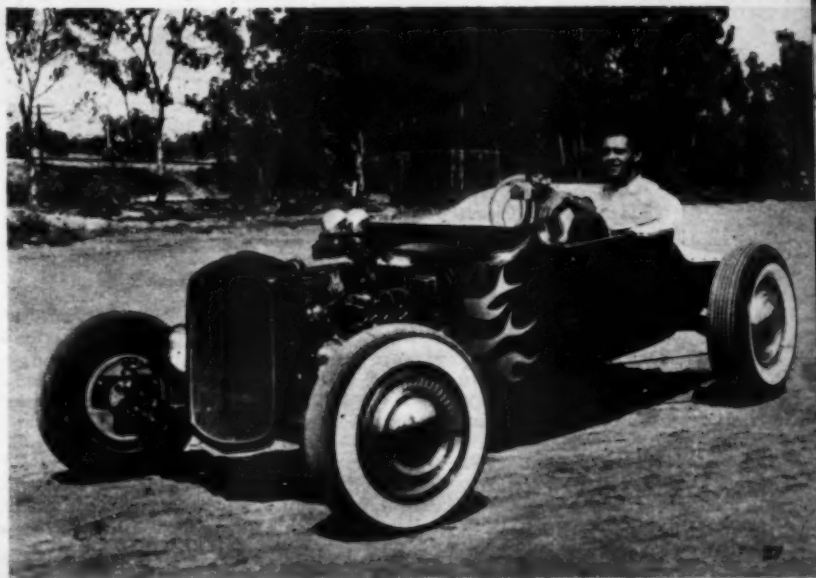
Channeling on this body is about same job as on a T, and leg room gets just as cramped. Frame beneath this example is from a Model A Ford. Off-white Naugahyde upholstery provides sharp contrast to black lacquer job and the brilliant red flame job.



So many alterations have been made to dashboard side of T's cowl that the T appearance has almost been lost — yet windshield posts give it away. Rounded dash houses deep-set scrolled panel with, again, S-W instruments, and a pressure pump for use at drags. The small steering wheel helps compensate for leg room in channeled body. Pink exterior is contrasted with black and white interior. As on Dodge, the T reposes atop a set of A rails, but special X-members have been substituted.



A quick glance at these cars and they'd both pass as T's, but only the one above is the real thing. Perhaps the fading street roadster would make a comeback if enough Dodge (or similar) older-type roadster bodies could be uncovered. Only really evident difference between types is at top of cowl. Both are V8 powered.



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quad-izing a hauler

PART I

Quad head and taillights are a cinch for late Ford pickups.

This month the front end gets the works while the next installment will bring up the rear.

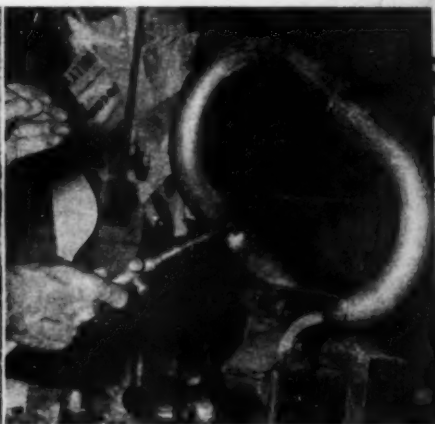
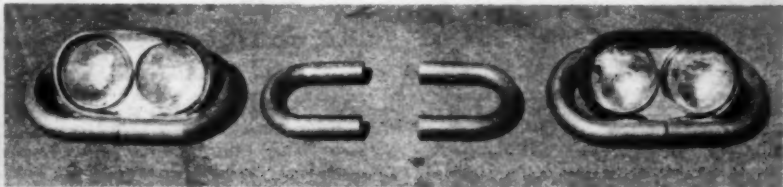
IT HAS BEEN nearly a year since R & C turned out the first big quad headlight issue (Feb. '57), where in light trends were accurately predicted, the makes that would incorporate quads by '58 were named, and the first custom quad installation until that time was shown—the R & C Dream Truck being the subject under discussion. And now, eleven months later, let's take another look at the customizing department and see what trends are currently being developed for vehicles of an era prior to the quad craze.

Last year's how-to-do-it quad installation on the Dream Truck was admittedly a bit more complicated than most readers would care to undertake, so in retribution here is an easier follow-up. Again it's a pickup—since more body shop customers are driving ½-tonners than ever before—but this time a Ford. Have a look-see:

Photos by Barris

Prior to 1957, Ford pickup trucks were blessed with an interesting frontal treatment. Headlights were not a part of the fenders so restyling possibilities were limitless. Here's a corner of the grille area with the bar and headlight removed.

A trip to a Chrysler agency netted headlight units from a '57 Windsor for the reasonable outlay of \$52.00, including lights, mount base, buckets and the rims. Surrounding units here are sections of $1\frac{1}{2}$ " tubing to be used during installation.



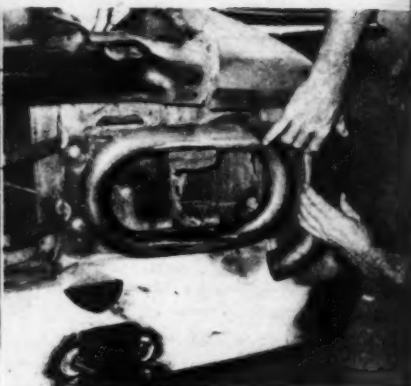
With rim and lens units removed to prevent damage, light assembly is fitted between two U sections of drawn $1\frac{1}{2}$ " exhaust tubing with an 8-inch diameter. Tubing ends are trimmed until snug fit results, then pieces are clamped in a vise and...

...welded together as shown. It is to be stressed that drawn tubing be used instead of heated-and-bent material which is subject to irregularities in configuration which could spoil otherwise perfect job. Once the oval sections are welded and ground down...

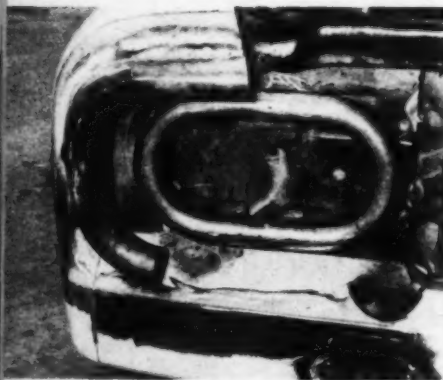
QUAD-izing a hauler continued



...they are temporarily positioned for alignment and fit. Little more than mounting the units would finish the job for those wanting the easy way out, but more work is to follow on this particular installation. So follow along, if you're so inclined.



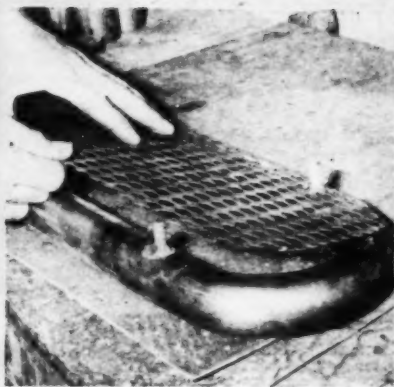
Larger radius, 2" exhaust tubing is fitted to leading fender edge to provide fender symmetry around headlight units. Note within dual-lamp frames the three mounting tabs for Chrysler units. Studs on assembly will correspond to holes drilled through tabs.



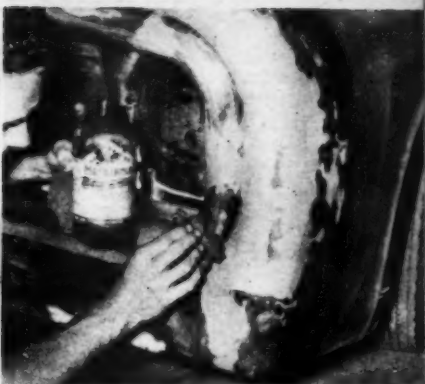
Tubing sections fitted to fenders are being welded. Careful fitting of pieces had allowed the pipe to fit exactly into concave edging of fenders, so little more than slight leading will finish the job after the welding. A case where forethought really paid off!



For this radical operation (which needn't be followed by those wishing only the dual lamp installation), straight length of 2" tubing is welded to forward hood edge so it will match new configuration of the fenders. Once again, but little lead work is needed.



And now the grille: Tubing similar to that used around headlights is welded to form oval which fits between the light units. After mounting studs are welded on, piece of perforated or expanded metal is trimmed to shape and screwed down after chroming.



After final metalwork, careful cleaning precedes first several coats of surfacer. Acid used in leading has to be cleaned off before any paint can be applied, and metal treated to prevent formation of oxidation. Once cleaned, primer can be mixed and sprayed.

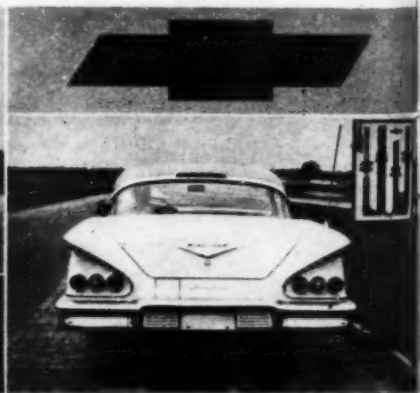
Pointing and plating of parts, then assembly, will bring front end of the hauler up to this distinctive appearance. Next month we'll go 'round back to show similar rear end and styling — with dual taillights — as it is successfully applied to the truck.



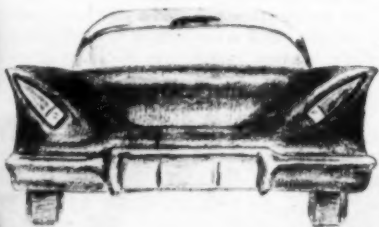
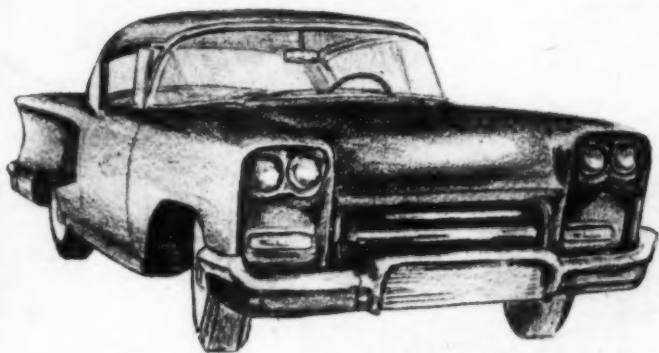


customizing the '58 chevy

enthusiasts everywhere await the first restyling of the new Chevrolet and several stylists and auto-minded people submit their ideas of what it should or could look like, properly done



Both the Rod & Custom Dream Truck and soon-to-be-unveiled 'Bird are familiar to the shop of Harry Chamberlain, suspension expert. It was Mr. Chamberlain who built the practical air suspension beneath the truck and modified the Thunderbird underpinnings to turn an old lady's car into a handling machine that gets around corners like a good thing. A student of fine arts with an eye for good design coupled with mechanical practicality, Harry has come up with a design that lacks the gaudiness thought necessary by some, but which has the merit of being feasible to accomplish. Harry's Alignment Shop in La Crescenta, California is often the haven of rods and customs with steering and braking problems due to overdone and incorrect lowering and thus it becomes easy to understand the attitude of the shop regarding moderation in suspension rework.



In choosing a custom design for the '58 Chevy it was my particular aim to arrive at something practical for the average person to achieve. A design that would stay in step with the models coming out in the next several years was also a thought behind this restyle. Fibreglass or sheet metal fabrication with no radical changes would keep any costs on a reasonable level. The basic Chevrolet styling is nice and elimination of the hardware emphasizes the overall theme. Any suspension changes would be of minor nature such as lowering a slight amount and stiffening up the ride to eliminate the floating sensation and improve the handling.

—Harry Chamberlain

'58

continued



An auto design major in art school, R & C graphics editor Lynn Wineland puts years of rodding to use in his column, Off the Sketchpad. Lynn has been a design consultant for several of the county's foremost custom shops, worked up the styling themes for the Dream Truck and 'Bird and will have

had a hand in some of the ideas to appear on a special '58 Mercury. He submits two drawings this trip—one his personal ideas for a clean restyle, and the other a version of what he feels will happen regardless of how many well thought out designs are shown for suggestion and encouragement.



The first restyled '58 Chevy to appear before our wondering eyes will no doubt possess the many fad items of the day which turn up with frightening regularity, regardless of their effect to the styling of the helpless automobile on which they have been affixed. A visit in the months to come to local club car shows may turn up one, some, or many of the type portrayed here. Lowered to the point of ridiculous impracticability, possessing chromed pipes that for legal reasons have never had an attempt made at connection with the exhaust system, and painted in a manner without rhyme or reason, these objects of the judge's scrutiny are dazzling examples of "if some is good, more is better — and then lots more must be best."

In an effort to "beat the Jones" (keeping up is no longer enough) an idea that once had merit has been so overdone as to be abusive and is a mockery to the intelligence of today's automotive hobbyist.

Plated upholstery, once done tastefully and for reasons of comfort, design and long wear now appears both inside and out of the car. Steering wheels, pedal pods and even undersides of the body are now common areas to fall prey to the tuck and roll mania. In this effort to outdo all comers, the future foretells fancy upholstery for hubcaps, radiator, mufflers (no problem on show cars which are not used as transportation, hence never started), headlights (all six) and ash tray interiors. Even the space under the hood is no longer sacred, tho' till now the engine itself has been spared. Look soon for plated water pump pulleys and generator covers. Driveshaft muffs and differential gloves, too, present new frontiers to be conquered.

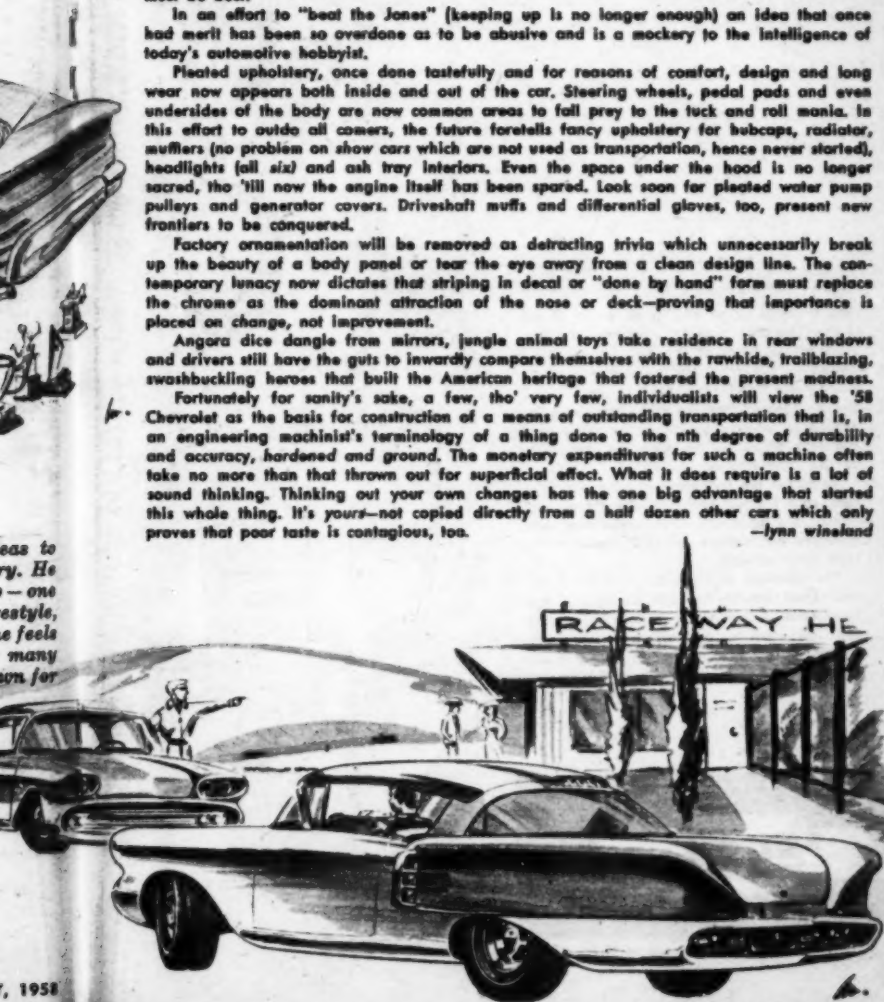
Factory ornamentation will be removed as detracting trivia which unnecessarily break up the beauty of a body panel or tear the eye away from a clean design line. The contemporary lunacy now dictates that striping in decal or "done by hand" form must replace the chrome as the dominant attraction of the nose or deck—proving that importance is placed on change, not improvement.

Angora dice dangle from mirrors, jungle animal toys take residence in rear windows and drivers still have the guts to inwardly compare themselves with the rawhide, trailblazing, swashbuckling heroes that built the American heritage that fostered the present madness.

Fortunately for sanity's sake, a few, tho' very few, individualists will view the '58 Chevrolet as the basis for construction of a means of outstanding transportation that is, in an engineering machinist's terminology of a thing done to the nth degree of durability and accuracy, hardened and ground. The monetary expenditures for such a machine often take no more than that thrown out for superficial effect. What it does require is a lot of sound thinking. Thinking out your own changes has the one big advantage that started this whole thing. It's yours—not copied directly from a half dozen other cars which only proves that poor taste is contagious, too.

—lynn wineland

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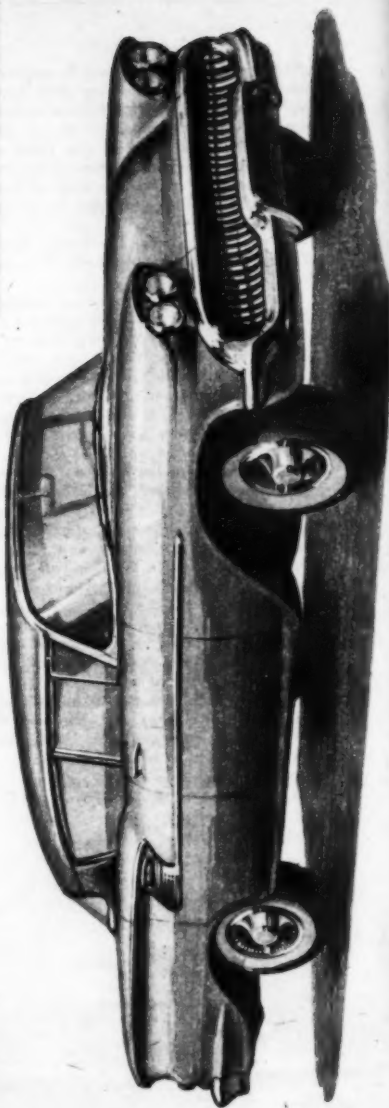
The talents of Mel Wysock are well known to regular readers of R & C who remember his outstanding airbrush rendering of The Dragster which graced our September cover in '56. Currently the design and styling abilities of Mr. Wysock are put to good use by Pasadena's Satellite Corporation of America, but his personal interest in good things automotive prompted him to put the pencil to the Chevy.

The greatest effort of this redesign of the 4-door hardtop was to eliminate the flatness of the front of the car. To do this I reformed the front of the hood to slope more, eliminated the parking and directional signals from the grill area, and installed a concave grillwork. An additional aid was given by painting the underside of the front bumper.

To soften the humped feeling around the rear seat I tilted the roof down from the windshield about 2 inches at the rear, and removed the chrome panel in back of the rear door window.

The addition of a chrome pad under the rear door handle is both decorative and functional. A few extra items like extending the eyelids, and removing a large amount of chrome were done purely to the taste of the designer.

—Mel Wysock



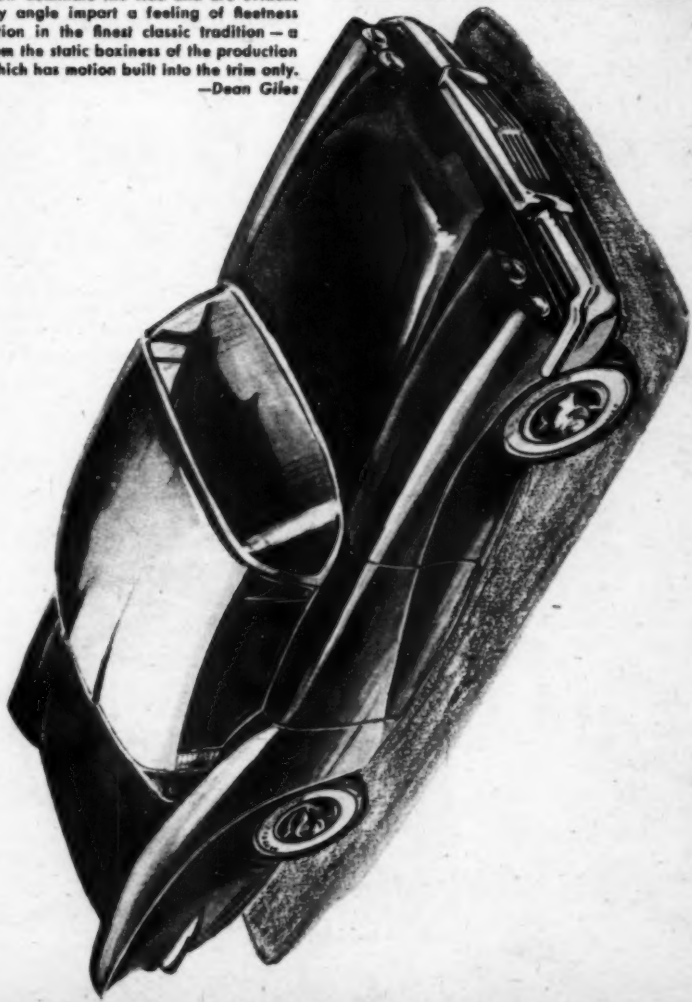
'58

continued

The Chevrolet failed to show the radical change that was expected for '58. The Corvette influence did not materialize, so an attempt was made here to convey more of the sports and classic influence into the Hardtop Coupe. The open area behind the wheels and softening of the hood pick up the Corvette theme. The overly heavy front end treatment is alleviated by removal of the parking and turn lights, removal of the grillework and raising of the bumper so that its center section becomes the air intake. A panel below it rounds off the front end and conceals the running gear. The sweeping lines which now dominate the side and are evident from any angle impart a feeling of fleetness and motion in the finest classic tradition—a relief from the static boxiness of the production model which has motion built into the trim only.

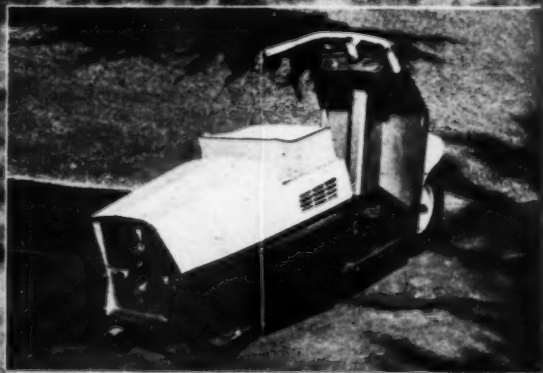
—Dean Giles

Commercial artist Dean Giles was no doubt guided by his affinity for the classical school of auto design when he made the painting shown. No "Tea-Bagger," ex-Marine Sgt. Giles prefers the lines of the MG TC and Jag "SS" sedan to grace his garage area rather than an overly pompous Detroit-built box. The new lines he has put to the '58 Chevrolet seem to imply his thoughts of, "Don't just lie there—do something!"



two-wheeled torture test

*proving that 2 wheels
can be better—and far less
expensive—than 4*



Images by Spence

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BROCHURES extolling the virtues of two-wheeled transportation have been piling up in our office for a long time. A year ago we had asked various manufacturers to send us data on their light motorcycles, motor scooters, motorized bikes and other related machines, as we had a test in mind. Ordinarily, such requests are answered by a barrage of literature when a chance for publicity is seen, naturally enough but we had made a qualification that had apparently frightened off would-be transportation providers. Our five test was planned not on super-smooth highways under ideal weather and traffic conditions, where even subarctic machinery would probably perform admirably, but beyond the continental limits of the United States to the south — Mexico!

As a consequence few manufacturers seemed anxious to have their products put through a real torture test — thus easing our chore of having to select machines from a multitude of offerings. Seemingly undaunted by the fact that the test machines might be literally pounded to destruction, only one manufacturer was actually eager for us to make a selection from the many models he offered — to do whatever we wished with them, and to *not even bother returning them* if reports proved contrary to hoped-for expectations. Over-confidence we thought, anxious to defy the words and promises of eager advertising copy-writers, but we were proved wrong — tho' not until hundreds of hard miles had passed beneath the low-along floorboards.

Cushman, giant of the scooter world, placed at our disposal anything they build for as long as we wanted. From Cushman Motor Sales, Inc., Los Angeles dealer for the products, we selected two 720 model machines from among the five sports models available. After due deliberation, during which we poked through the innards of, tested the comfort of, repeatedly started and stopped the engines of, and examined the construction quality of every single machine in the shop, we selected two 720 series machines — a Deluxe 725 model with two-speed transmission and a less expensive #722. Cushman Motor

Cushman's 725 model, with 2-speed transmission, proved rugged enough to withstand the rigors of Mexican roads; though neither were built with the other in mind. Two-day test equalled six months of normal usage.



Sales made all arrangements for special Mexican insurance, and otherwise obliged us in every conceivable way, we headed southward to the enchanting land of *mañana*.

Our journey by scooter-carrying pickup truck ended at the far reaches of what is loosely referred to as a paved road deep in the interior of the Mexican state of Sonora; noted for its year-round sizzling temperatures (where the average exceeds that of Saudi Arabia), expanses of endless desert (where on numerous occasions travelers have perished from lack of water), and the fantastic absence of anything resembling roads!

Miles later, after having crossed rock-strewn dry creek beds, battled through powdered dust that filtered to every part of the chassis, lugged through hub-deep sand, the scooter's short-comings became obvious. They simply weren't built for the abuse we were dishing out — but we had known this before we started; what we wanted was to reduce the machines to junk. The unsprung rear wheels gave the machines — and us — a terrific pounding, especially across mile after mile of sun-baked mud with a surface not unlike an oversized washboard. And we can report that neither scooter suffered even after several hours of this punishment. The potent "Husky"

(continued)

two-wheeled torture test continued

engines were still full of fight when the testers were ready to drop!

A small Mexican town paid our travelers homage by closing the school so the kids could see the *crazy gringos* astride machines the likes of which most had never seen. Timid at first, the kids—and it seems there are more in Mexico than anywhere else—began asking for, and getting, rides back and forth along the chuckhole-filled, rock-studded, dried mud street that wound between the scattered adobe homes. Over 150 youngsters were given rides before we could bed down for the night, yet a very tired once-over showed no apparent overexertion of anything save our intrepid adventurers—aside from a ½-inch thick layer of gritty dirt all over the engine, transmission and other driving parts. It was estimated that that single day's ride was the equivalent of at least six months' usage under normal conditions.

Heading back toward a rendezvous with the pickup truck the following day, an alternate route was chosen where roads of another sort were encountered. On these the ground surface was as hard as cement, but the vague tracks we followed wound

through boulder-strewn gulleys. Speeds were above those of the previous day—but a quick turn around a bend in an *arroyo* might disclose a small rock slide. This is where the maneuverability and braking system of the Cushmans first were noted, despite the fact that the optional front wheel brake was not included on either test vehicle. At times speeds were so slow that maintaining balance became something of a chore, yet the engines, which depend upon air circulation alone for their cooling, showed no tendency to overheat and continued to purr smoothly regardless of what was asked of them. And it was *plenty!*

Two wheel vehicles, unfortunately, are especially susceptible to upsetting, and ours were no exception. Our 722 model unvoluntarily dropped into an unseen chuckhole, cartwheeling machine and operator in a series of spectacular loop-the-loops down the bumpy road of a tiny village. Damage to both was about equal—skinned knees, elbows and ankle to the one, a bent fork, caved-in rear deck and front shield to the other. But again, the patient little "Husky" idled contentedly away until the shut-off button was pushed.

Operation of 725 model is simple, requires no more than a few moments getting used to. Pedal at right is brake, one at left operates clutch. Automatic engagement of clutch eliminates pedal usage when starting from dead stop, thus easing balancing of scooter. Throttle control is by twist of handle grip. Scooter's modern design, below, is as up to date as any late model vehicle; compared here with '57 pickup.



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Heavy forged side arms converge in fork fitted with leading link suspension. Steering shaft turns in ball bearings. Springing is by twin coils, a great advancement over unsprung earlier scooters.

Tires are only ones designed especially for two wheeled vehicles.

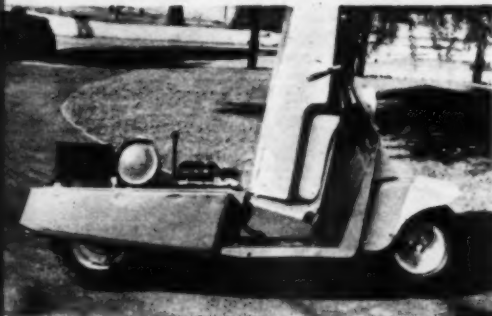
Encountering (at last!) more-or-less normal pavement, we managed a top speed run of 51 mph (with the 725, transmission model) and learned that that our overall fuel consumption figure stayed above 57 mpg - despite the lugging down of the single speed machine and the miles of low gear riding on the other!

Back in U.S. traffic, the wonderful maneuverability of the Cushman scooters again made itself obvious. A comfortable cruising speed can be maintained through snailspace traffic in comparative safety. And believe us, after living with L.A.'s congested conditions, this was a heartfelt thrill. AA, those poor boobs in cars! Many is the time since the test that we wished we still had the Cushmans.

Grin on staffer's face is a phony - rough ride over baked-mud streets in Mexican towns was nearly unendurable. Heroic adventurers gave up trial while the two scooters were scarcely broken in. Photo below shows accessibility of all running gear, engine, small luggage trunk and fuel tank. Kick-starting gave a bit of trouble on test, but practice on choke setting and advancement of throttle during starts eased the chore.



And parking - what a cinch on the scooter. In short, the adage "make your second car a Cushman motor scooter" is not to be taken lightly. For trips to school, work or when riding for sheer pleasure, the maneuverability, economy, comfort and wide speed range of the Cushmans makes them more than just a worthwhile investment to all ages, whether they be city or suburban
(continued)

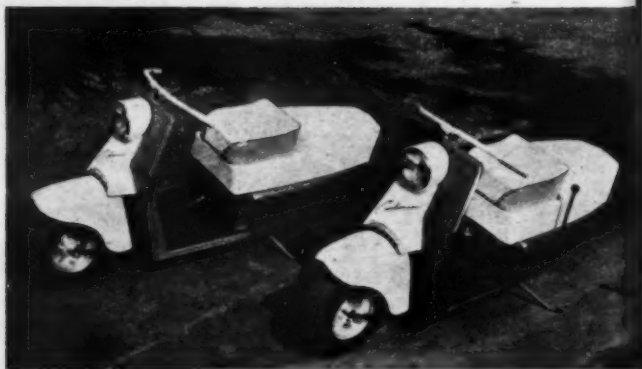
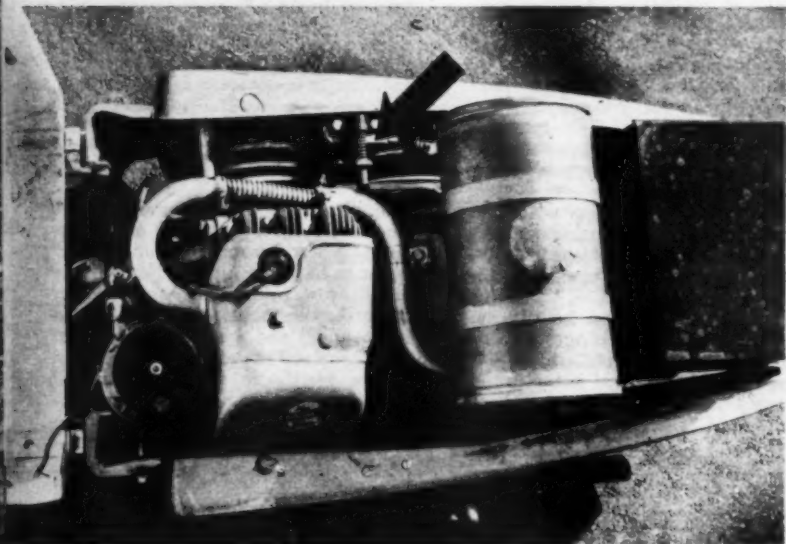


two-wheeled torture test continued

dwellers. Teenagers, in particular, are to be attracted by the advantages the scooters have over automobiles — especially where initial cost must be considered. It is seldom that the many ad-

vantages noted above can be had for less than \$400.00 in this day and age with an accompanying running cost of only $\frac{1}{4}$ of a cent per mile, yet here it is — ready, willing and able. ●

Innards are bared with deck raised. Paneling in center is engine-cooling shroud, just ahead of it is circular oil-bath air cleaner, an optional item. Arrow indicates small, 2-speed transmission operated by lever extending from body's left side. The two test models are shown at bottom, 722 at left and deluxe 725 model at right.



Two of the almost numberless Mexican kids who were treated to ride on the Cushmans, lounge wondering if photographer will put away black box and get back into scooter act! 150 different kids were ridden through small towns over roads roughly equivalent to solidified plowed field. Scooters—and kids—held up.

SPECIFICATIONS OF R & C TEST SCOOTERS

ENGINE:

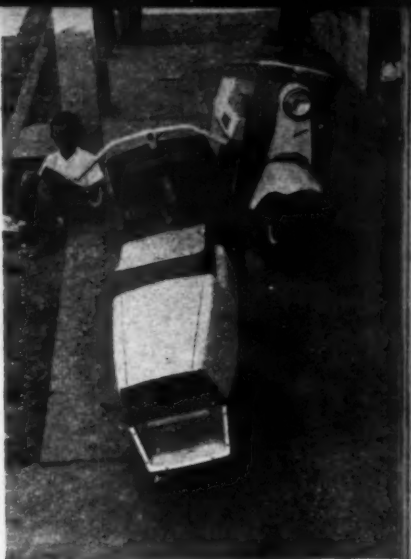
4-cycle 5 hp, air cooled
Drop-forged camshaft
1 1/4" diameter silichrome steel valves
1 qt. oil capacity. Positive action pump
Tillotson horizontal carburetor
Oil bath air cleaner; optional
Permalite magneto ignition
Foot-type, kick starter
2-gal. fuel tank
Cylinder and crankcase cast integrally
Aluminum, deeply finned head
3" x 2 1/4" bore and stroke
Aluminum alloy piston
Insert con rod bearing

CHASSIS:

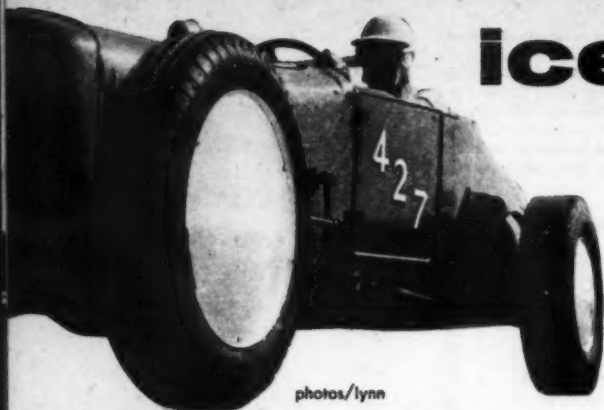
Rear wheel brake standard, front wheel brake optional. Both fully shielded from sand, dirt and water.
6 1/2" diameter brake drum, heavy duty lining.
Split rim wheels with adjustable tapered roller bearings.
Steering fork turns in ball bearings, leading link type with expansion springing.
Machine cut steel sprockets, case hardened
Roller-type chain.
Automatically engaging clutch, centrifugally activated single disc
Clutch bearings; Model 722, bronze—Model 725, needle bearings
Two-speed sliding transmission available on Models 725 and 765.
Alloy steel, precision-cut transmission gears
Main and counter shafts mounted on anti-friction bronze and ball bearings

DIMENSIONAL DATA:

All models of 720 series:
54" wheelbase
77" overall length
28" width at handlebars
38 1/2" overall height
Model 722 — 275 lbs.
Model 725 — 310 lbs.



A rare burst of speed is enjoyed by tester as an unexpected section of smooth road turns up. Endless miles had been traveled at scarcely more than idle speed, yet Cushman "Husky" did not suffer overheating.



iced T

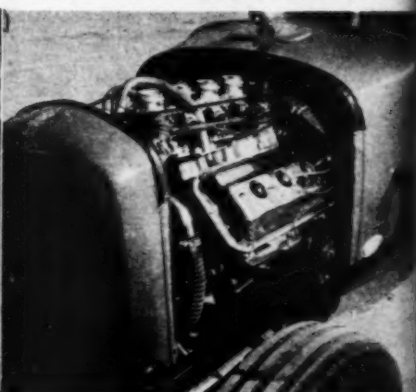
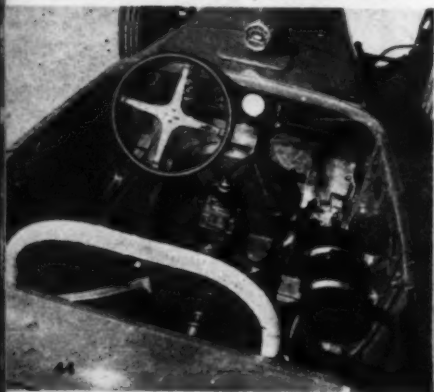
photos/lynn



Functional front end, free from frivolities is proof car was built for go and not for show, although it can hold its own in that department too. Dropped front axle, tubular shocks, reversed spindles (to put tie rod ahead of axle), and chopped '32 shell can be seen in photo. Cooling for the engine is taken care of by a Crosley radiator. Small hole in panel covering grille opening admits enough air for drag racing, where engine is not run for sustained periods. Cover could be easily removed for other types of competition (or maybe for street use?).

"Control room" of the DeSoto-T has a racing type steering wheel, sturdy roll bar, minimum instrumentation. The transmission is '39 Ford with stock gears. Complete flywheel shield is used for safety beyond NHRA requirements.

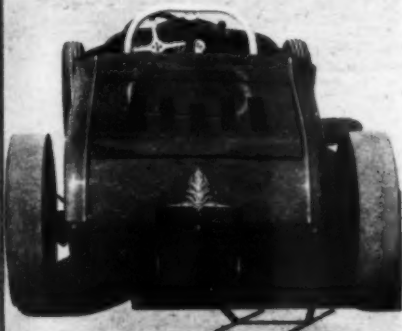
Power supply for the roadster is this 1933 DeSoto equipped with four Stromberg 97's mounted on a Weiland manifold, Scintilla Vertex Magneto, Iskenderian crossflow cam, Forgetrue pistons, and a Weber flywheel.





This '27 T was purchased in 1952 from its original owner by R & C staffer, Lynn Wineland. It was subsequently sold to fellow Dayton Ohio "Hoodlifters" member, Tom Heeter, who took several years of painstaking work bringing the car to its present state of perfection. Present owner Bill Stewart, of Cincinnati, made modifications to frame and firewall to install his husky DeSoto V-8.

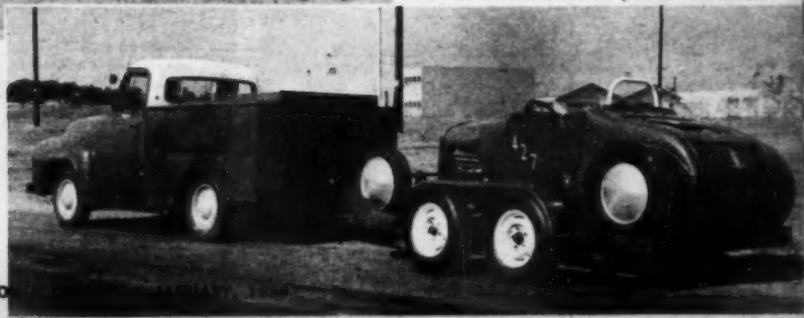
*something cool for
warm Ohio summers*



1933
'97's
Intilla
cam,
wheel.



The beautiful little T is loaded onto the trailer for the long trip home at the end of the 1957 National Drags at Oklahoma City. Due to difficulties in the valve train (reportedly from over-revving) the car was unable to compete in the final eliminations. Construction of the trailer is on par with roadster.



RO

bobble's merc

*there's more here than
meets the eye*



FEW ARE the moderately restyled customs running around loose that embody radical chassis changes. This example is an exception to the rule-of-thumb that only the more radical customs employ reworked undercarriages, and with such changes generally only trivial in nature.

(continued on p. 56)

Photos by Beindorff

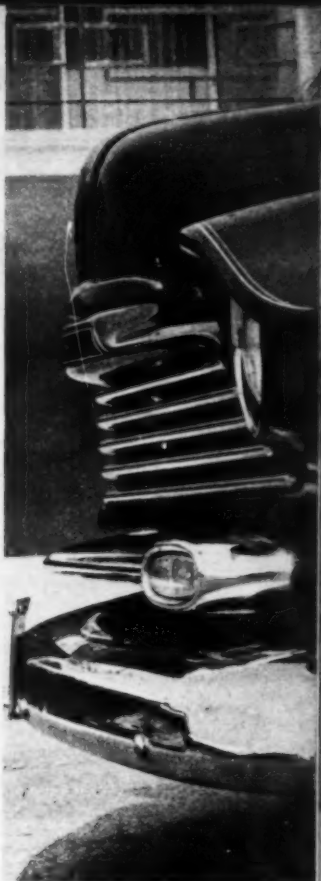
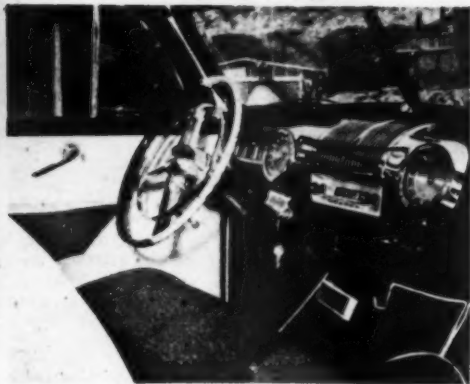


"More than meets the eye" refers to the underside GM parts this Merc possesses. All running gear behind engine comes from either Cad or Olds, even rear springs (at left). Springs were more easily attached to Olds frame than Ford, so Olds frame section was grafted on. Considerable body revamping was necessary so Merc floor contours would align with the Olds frame curvature. Splice was made just ahead of rear axle kickup forward of wheels.

Novel frontal treatment resulted from use of '55 Chrysler light bar and bumper, handformed bar stock set within frenched opening. Shaded light complement Merc's appearance, an unusual styling gimmick for an older car. From outward appearances, Merc appears as being customized only but big Cad engine and GM chassis lurk out of sight.



'54 Chevy taillights, turned sideways, are frenched into flaired housing molded to rear fenders. Barely visible in above photo is the '48 Olds bumper. Owner, employed at Colgan's Auto Upholstery in Burbank, Calif., did a remarkable job of doing inside in Naugahyde and frieze.



JANUARY, 1958

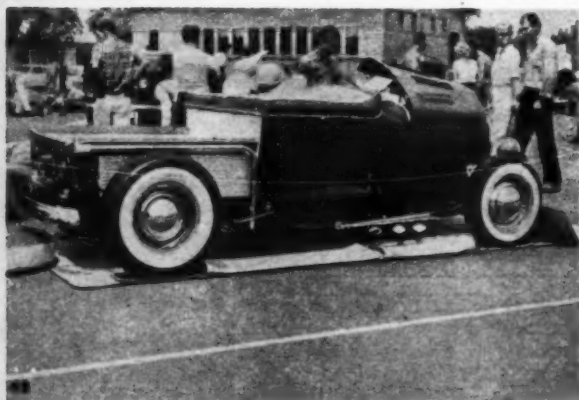
secrets of showmanship



IF YOU'VE ATTENDED many car shows, you've probably wondered just what does it take to prepare some of the beauties you've seen on display, especially those which are obviously

real showpieces and prize winners.

After going to a score of custom car shows throughout the country during the past year, we feel that we've hit upon at least a semblance of an answer



On the average, Eddie Ducazuu spends about 3 hours setting his pickup up for typical display. Efforts pay off, tho; ten awards at ten shows! Of special interest is bed treatment—outside is plated Naugahyde(®), and even the inside is fully upholstered though usually hidden by protective canvas tarp.

ROD & CUSTOM

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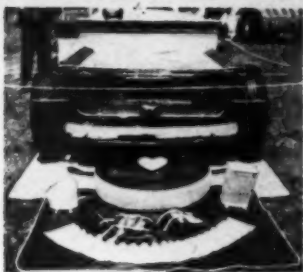
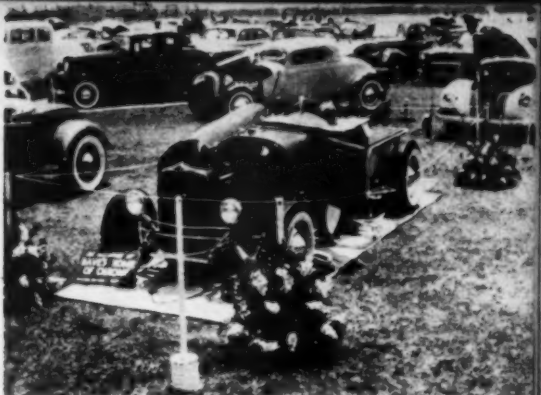
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BY JIM POTTER

Lending a funeral-like atmosphere, bouquets enhance each corner of Eddie's "car show with a show." Car sits on special pad with a quilted panel for each tire to rest upon! Below is attractive method of displaying tools and spare tire. The heart shape is carried out throughout the car's upholstery motif. Color scheme is red and white.



to these "Secrets of Showmanship," and we've picked out one truly spectacular roadster-pickup to give you an idea of what we mean when we speak of cars built for show.

We first spotted this car at the annual Renegades of Long Beach custom car show. Four huge bouquets, one at each corner of the roped-off display, highlighted the exhibit, making it
(continued on p. 64)

Wheels of Eddie's hauler are from a '48 Mercury, reversed and neatly chrome plated. Headers (chromed, of course) lead off from each exhaust port of the flathead V8. Teardrop taillights on plated tailgate are '39 Ford. With all due credit to builder Ducasse, car would not appear nearly so radical sans its unique upholstery and clever accessories. But this type of display may soon be what it takes to win.



Of all the factors encountered in making a car accelerate as quickly as possible, which is the most important? What single thing is dominant above all others? Roger Huntington clears up a long-standing mystery—and, as a bonus, shows how you can easily calculate your engine's horsepower without a dynamo!—or, if you know your horsepower, how to figure your car's 1/4-mile time without ever running it!



horsepower

ANY SELF-RESPECTING engineer knows that the way to make Mother Nature work for him instead of against him is to reduce her laws and whims to mathematical formulas. This is the only way to really understand what's going on, so you can do something about it. Smart men have been figuring things out on paper for 300 years — and we're still doing it.

This thought occurred to me the other day as I was watching the "B Altered" class battle it out at the drag strip. The burning question: Is the speed at the end of the quarter a close function of the car's power-to-weight ratio. In other words, if we plotted this speed for each car against that car's true

weight/hp ratio on a graph, would the points fall close to a single line or curve? If they did — if there was a definite "correlation", as the mathematicians say — then we could be pretty sure that the weight/hp ratio was the most important factor in determining a car's speed at the end of a standing quarter-mile. And the converse would be even more important: If this is true, and we know the speed at the end of the quarter and the total weight of the car, we should be able to estimate the true engine horsepower quite closely from the previously-mentioned graph. Right? This, in turn, would give us a simple way to estimate the output of a modified engine without dynoing.

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BY ROGER HUNTINGTON

photos/lynn



R at the drag strip

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Admittedly I didn't expect too much before I plotted the graph. I had tried a similar project some time ago, plotting elapsed time for the quarter against true weight hp ratio. It didn't work too well. There was a lot of "scatter" in the points; they seemed to fall all over the page, and not really close to any one well-defined line. This lack of correlation didn't come as much of a surprise — and it proved, of course, that other factors besides weight and power were having a vital effect on the e.t. Obviously the amount of traction you have (in turn dependent on the type of tire, fore-and-aft weight distribution, whether a locked rear end, etc.), driving technique coming off the

line, gear ratios, and shift points can make a difference of two or three seconds on e.t. Very often a well-set-up and well-driven car with a relatively high weight/power ratio can beat a car with a much more favorable ratio, but whose driver and pit crew don't know all the tricks. So I didn't expect too much correlation on the e.t. graph.

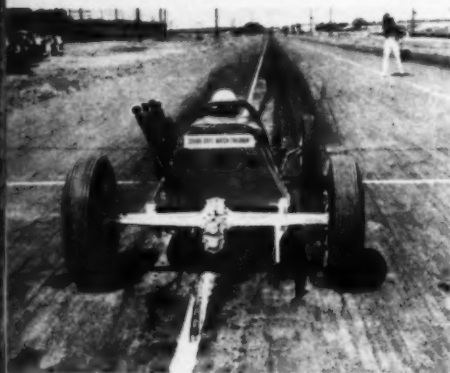
But the more I thought about this top speed graph the better it looked. An afternoon at any drag strip will show right away that the usual "variables" like traction, weight distribution, driving technique, etc. have little effect on the terminal speed. One time a certain car will get out of the chute

(continued)

TOM

horsepower at the drag strip continued

like a rocket and make a beautiful e.t.; next time the driver will goof and burn rubber like mad, lose a whole second in the first hundred feet — and yet his speed at the end of the quarter will very likely be within 2 mph of the previous speed. Notice it sometime. Or you can change tires, gear ratios, etc. and still not have a big effect on top speed. Or you can even take a 15-mph rolling start and not increase top speed by more than 1 or 2 mph! Admittedly the above factors are more critical on the faster cars. When a car can get up to 130 mph or more in 1320 ft., things like tire size, gear ratio, take-off technique, shift points, etc. are bound to influence the terminal speed more than the average car that can hit between 70 and 100 mph in a quarter. But these side effects are by no means dominant — and that old weight/hp ratio still has the last word.



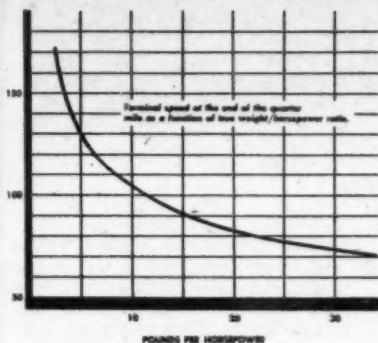
On this reasoning, then, I approached the problem of correlating quarter-mile speed with the true weight/hp ratio graphically.

The next problem, of course, was to pinpoint the "true" horsepower for the cars I would plot out on the graph. Factory advertised ratings were of no use to me here, even on the stock jobs. These power tests are run under very special (and favorable) conditions, and you can't come anywhere near the figures on the road with a showroom

model (though sometimes a well-tuned stock racing car will come pretty close). Best rule-of-thumb for determining true clutch hp from advertised ratings is to just say it's 15 to 20% less. That would be, say, 200 hp true output from an engine advertised at 250 hp. (Some engines, unfortunately, will run more than 25% under!) In the case of modified engines, of course, we are completely at sea, because these are seldom tested on a dyno—and "road horsepower" figures from a chassis dyno are useless because of the uncertain rolling resistance of the tires on the rollers.

But I've got a gimmick. I have run many personal road tests on all kinds of cars in the last four years, from stock '54 Fords to a modified Porsche coupe and a 110-mph competition roadster. In addition to all the usual acceleration figures (0-30, 0-60, 0-100, standing $\frac{1}{4}$ e.t. and speed, etc.) we usually included a check of *accelerometer* readings in 2nd gear over the full rpm range. Using these figures for full-throttle acceleration at various speeds (mixed with some pretty complicated slide rule gymnastics), I was able to calculate the true hp curve with considerable accuracy. These power figures, then, formed the basis of my speed curve—with some careful "guessimates" filling in data in the upper part of the curve, for cars doing over 120 mph which we didn't have an opportunity to check.

Well, to make a long story short, I did get good correlation — considerably better than I expected, in fact. I plotted 42 points on the graph, and they all fell right along a smooth curved area. Then when I drew in the single line that would average out all the points no point fell more than 3 mph above or below the line! This is really good correlation in statistical terms — and should allow us to estimate speed and power figures with considerable accuracy. Furthermore, the excellent correlation proves that the weight hp ratio is, in fact, the dominant factor in determining terminal speed on the quarter mile strip.



So what practical information can we get from the accompanying graph? Well, suppose, for example, that you have a stock '57 Chevrolet Bel Air power pack rated at 220 hp. We have to use *gross* weight here, of course; and the safest way to pinpoint this is to actually weigh your car as it will run at the strip *with you in it*. Let's say this comes out to 3580 lbs. The true hp output will probably be 15 to 20% less than 220 — or let's say 180. So our true weight/power ratio is $3580/180 = 19.9$ lbs./hp. Our graph says the speed at the end of the quarter should be about 82½ mph. Sound reasonable? I think it is. Or if you should, by some miracle of tuning, be able to bleed the full advertised 220 hp out of the engine, your weight/hp ratio would drop to 16.3 lbs./hp, and the graph says the speed would jump to 88 mph. This, in fact, is the kind of speed the top boys are getting on the 220-hp '57 Chevs around the country. (Most, of course, are using the lightest model they can get with that engine — with spare tire removed, all excess weight stripped, and light fuel loads. Cutting weight is just as effective as adding horsepower.)

Our little graph will explain away all kinds of fantastic drag strip performances. For instance, stock carbureted '57 Chevs can exceed 90 mph without illegal modifications. The factory says the 270-hp dual quad engine with Duntov cam will actually put out 230 hp as installed in the car. Gross

weight of the lightest '57 Chev with a 150-lb. driver would be about 3450 lbs. This makes our true weight/hp ratio 15.0 lbs./hp — and the graph says the quarter speed should be 91 mph. Will the graph explain the handful of '57 Pontiacs that are hitting 100 mph on some California strips? This is a little tougher, but let's see: The graph says our weight/hp ratio would need to be 11.5 lbs./hp to do 100 mph. The lightest '57 Pontiacs could be stripped to about 3500 lbs. by removing spare tire, etc. With a 140-lb. driver this would mean that the horsepower would need to be $3640/11.5 = 316$ to do 100 mph. This is, in fact, just about what the factory quotes (317 hp) for their '57 NASCAR package with triple 2-throat carbs and hot cam. It is not impossible that a clever backyard mechanic could make a 347-cu. in. '57 Pontiac engine put out more than 300 horses with this optional equipment — by careful fitting of parts, increasing bearing and piston clearances, balancing, and fine tuning.

How about the lighter hot rods and dragsters? Well, suppose you dropped that above-mentioned '57 Corvette engine (230 hp true output) in a little T roadster that grossed 2050 lbs. with driver. Our w./p. ratio would be $2050/230 = 8.9$ lbs./hp, and the graph says we should hit 109 mph at the end of the quarter. What if we have a hopped '53 Olds engine in that car? The gross weight is up to 2210 lbs., but say the speed is down to 94 mph. What's our true horsepower? The graph says the ratio is 13.6 lbs./hp, so the actual horsepower is $2210/13.6 = 163$. Better do a little more tuning! For a dragster to hit 150 mph the weight/power ratio must be around 3.5 lbs./hp; for a typical gross weight figure of 1650 lbs., that means the horsepower must be $1650/3.5 = 471$. Reasonable, I think. Similarly, the Cook & Bedwell dragster hit 168 mph with a gross weight of about 1750 lbs. The graph says the weight/power ratio here should be 2.7 lbs./hp — so the true hp figures out to $1750/2.7 = 650$!

I'll back most of the above figures against all comers... but I'm not so sure about that last one!! ●

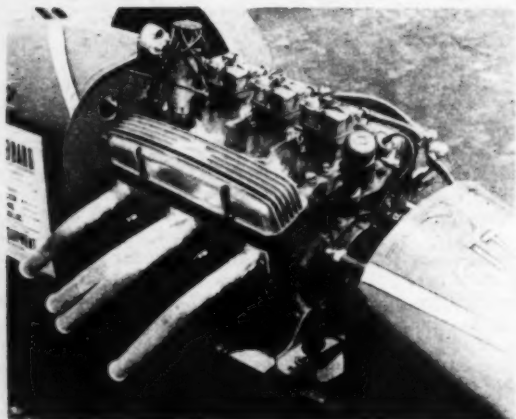
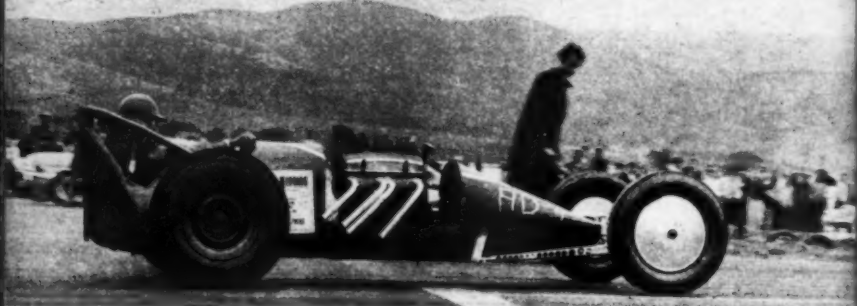
what it takes to be...

BY GEORGE BURNLEY

HENRY VINCENT, a top performer at Northern California drag strips, knows how to build a fast car. And well he should, for most of his friend's cars contain a lot of his handiwork. But the bug finally bit him and he turned to a dragster of his own. Fellow members of the Hayward Head Hunters rallied with technical and

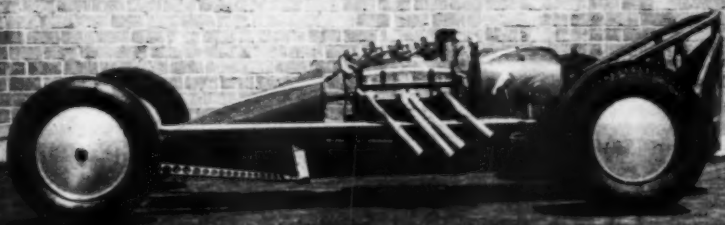
muscular assistance while friend Hillary Govia, recognizing the car's potential, virtually turned his City Garage over to the construction end of things. Govia, incidentally, started the late Bob Sweikert at sprint car racing and believes that Vincent has equal skill and ability.

(continued on p. 65)



Top Banana's fullhouse Chevy gets its power to the asphalt via a Schiefel flywheel and clutch; only components, owner reports, that will stand the twist that the Chev-8 produces. Low e.f.—producing Ford V-8 mill runs Edelbrock equipment, an H & C magneto and Iskenderian cam.

top banana



A recent newcomer to the drag racing scene, Top Banana gets its name from unprecedented number of elimination runs it has conquered. Dead-heated with "Jazzy" Nelson's new twin-Flathead machine.



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bobbie's merc

continued from p. 47

But Bobbie's Merc is different. And here's how:

Cadillac supplies the power, it going through a Hydramatic transmission before continuing rearward. Then, as long as things had progressed this far with GM components, it was just as easy to keep it up. Joining an Olds driveshaft to an Olds rear end is far easier than mating it with a Ford differential, so a '53 Olds was robbed of its aft axle assembly. Ever try hanging an Olds rear end from a Ford frame? It's almost easier grafting an Olds frame beneath the Ford body—and so this chore was duly carried out. Thus Bobbie's Merc is nearly as much a GM product as it is a FoMoCo item.

Famed Valley Custom Shop in Burbank, Calif., got the nod from Bob Hoshiko when he decided to give his '46 Merc the once-over. The Cad engine swap had more or less dictated the changes noted above, most of them carried out by Valley, so with the brute performing as it should labors turned to the stock exterior—almost grotesque in this day and age of scoops, multi-lensed taillights and high-flying fins. In short a real challenge for capable bodymen. The end result shows what forethought and imagination can do. A real show winner—as the car has been more times than even the owner can remember. ●

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STOM



IT IS SELDOM that a new product sparks a swift-rising fad, and out of that fad grows a real need for the organization of a national association—all in the space of eight weeks. But such is the case of the inimitable Little Go Kart; those 49-inch wheelbase, 55 in. "backseats," reported upon in detail in our November edition and again, briefly, in December.

The GKCA—Go Kart Club of America—was organized as the need was seen for such an association, to cope with the legal aspects of obtaining the use of a course in the immediate (Los Angeles) area. Too, the exact definition of a Go Kart had to be decided and a program of events arranged that would include something for every member of a Go Kart-owning family. With such basic elements worked out, assistance can be given groups in other territories as the club expands across the country—which it is already doing!

To prevent entry into the association of cars which would either hopelessly outclass the standard Go Kart or be such a sluggish performer as to constitute a course hazard, certain regulations had to be adopted. Essentially, to qualify as a Go Kart a car must be a 4-wheel vehicle of between 40 and 50 inches wheelbase with a tread figure two-thirds of that wheelbase. Engines are presently limited to 17 cubic inches (the widely used McCulloch chain-saw engine is only 5.5 inches!) and must be *two cycles*, only. Tire diameter cannot exceed 12 inches. The *2-cycle* only policy was made to keep the speeds of association cars relatively even. When actually racing, competing cars will have to be

watched inch for inch. This means kit cars will race together, dual-engined machines together, etc.

But racing is only a small portion of the ideas behind the GKCA. Dads throughout the country are rallying to their son's plea to build them a "real, little car." And these kids, for safety reasons, must be cautioned to various regulations, and areas where children run their cars must be policed. In the same vein, wives (or girl friends) of Kart owners can compete in trick driving contests. Novice neighbors can wobble around a designated area together without being subjected to the hazard of being straddled by a pair of 50-plus mph dual-engine machines. And so it goes. The point is, the versatility of the little Go Kart is such that all ages, sizes and those of wholly separated financial standing can enjoy the fun of Go Karting.

Rod & Custom has volunteered its services to the GKCA and stands willing to handle all queries, etc., that readers might care to send us. If it's a question about the association, the standard kit Go Kart, how to add another engine to a stock model, how to organize and supervise various events, or simply how to gain another 1 mph or so from a fuel burner, we'll act as intermediary and see that your letters go to the parties concerned. Write **GO KART** in care of Rod & Custom Magazine at 5959 Hollywood Blvd., Los Angeles 28, California.

Meanwhile, watch these pages as we'll be bringing you on a monthly basis, news of developments in the field. And remember; vacant lots and parking lots become *lots of fun* on a Go Kart! •

A R I N C E E

BY
PETE MILLAR

NOW CAN YOU BEAT THAT? THIS IS THE
FOURTH AXLE KEY I'VE CHEWED UP WITH
THESE 3.78 GEARS.....



PERMIT ME TO ASK HOW YOU GOT 3.78 GEARS
INTO A '34 FORD? IF YOU USED AN EARLIER
OR LATER REAR END ASSEMBLY, THERE'S...



...NO PROBLEM, BUT '34 FORD REAR ENDS ARE
QUITE DIFFERENT AND ONLY 4.11'S AND 3.54'S
SHOULD BE INSTALLED. IN ORDER TO PLACE
3.78 GEARS IN YOUR '34 HOUSING, A CONSID-
ERABLE AMOUNT OF CLOSE-TOLERANCE
GRINDING WORK MUST BE PERFORMED ON.....

KNOWS HIS GEARS HUH?

I'LL SAY HE DOES!



...THE PINION STUB SHAFT SO THE '34 PINION
BEARINGS AND RACES CAN BE USED. THE '35
OR LATER RING GEAR WILL FIT THE '34 REAR
END AS IS'... FOR YOUR PROBLEM, REAR
AXLE KEYS THAT ARE SLIGHTLY HARDER
THAN STOCK FORD KEYS MAY DO THE TRICK.

BET WITH ALL THAT KNOWHOW HE
MUST DRIVE A MEAN MACHINE!

I HEAR HE BUILT UP
AN '32 WITH A J-57
JET ENGINE



HOWEVER, I WOULD'NT RECOMMEND TOOL
STEEL KEYS; THESE WOULD REALLY TEAR
UP THE AXLE AND HUB. I'VE GOTTA CUT
FOR NOW.....I HOPE I'VE BEEN OF SERVICE.

THAT FIGURES!

IT MUST BE GREAT TO KNOW
EVERYTHING AND DRIVE
A REAL MACHINE



T-TIMERS
CALIF. STAGS
OAKLAND



Andy Booth whips up
calculated classic

making the Hupp mobile



All running gear with the exception of the front axle is '48 Pontiac. Transmission is '51 Olds HydroMatic, shocks are Munroe. Stubby chromed pipes emerge forward of the fender.

Radical front end change consists of 'Studebaker Hawk grill shell modified to fit the Hupmobile contours. Color is striking 2-tone, tone silver and bronze metallic combination.

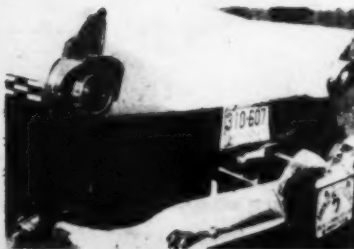


Small rear windows are definitely not an aid to navigation but rather a trademark of the classic styling of the late pre-war era. The taillights are from a '37 Oldsmobile.



Motivation comes from the 324 cubic inch '49 Olds engine fitted with quad carb, Silver-Lite pistons and dual pipes. Low speed torque of Rocket mill makes Hupp a real bear at stop lines.

out of the 48



MARYLAND

FROM THE outskirts of Baltimore comes Nick Conzantino's clean '50 Ford coupe. Customizing has just begun to spread through this section of the country and bystanders who see a Ford sporting a Chevrolet grille seem to wonder what crazy things Detroit will do next—not realizing, that alterations were a backyard project.

The aforementioned grille is a '54 Chevy complemented by a nosed hood and frenched headlights. Chrome strips from a '54 Olds separate the 2-tone black and white lacquer job. Lowering the same amount fore and aft brings the car down to a respectable level without giving it a look of either dragging its tail or burrowing its way deep into the ground.

Nick belongs to a newly formed club, the Road Knights, who are busy convincing Baltimore's populace of the good that can come out of a car-minded organization. More power to 'em!

WEST VIRGINIA

AS IN Baltimore, customs are few and far between in Moundsville, West Va., but Larry Rine didn't let that deter him when he tore into his '56 Victoria with a gleam in his eye. Hood and deck were shaved, and the grille originated at the fore end of a '52 DeSoto. Special hubcaps were whipped up using '51 Studebaker bullets and the stock Ford caps.

Three inches is the extent of the all-around lowering job, and the skirts have been highlighted through the addition of '54 Merc. grille "teeth." '51 Olds taillight lenses have been trimmed to fit over the Ford units.



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MISSISSIPPI

HARRY WARD has neatly solved a problem vexing many an enthusiast. He liked sports cars and he liked customs. Now, you can't customize a sports car nor can you go sports caring in an American car, so... Harry availed himself of an MG, which he splashed liberally with striping. Then he convinced Mom and Dad to let him hack into the family's '57 Ford. (Nice trick, if you can do it!).

Headlights were given the semi-french treatment by using '56 pickup headlight rims, and into the vacated grille cavity went a section of expanded metal. Elimination of hood hardware and bumper guards cleans up the Ford's appearance considerably. Aft, deck hardware was tossed out and an electric trunk-unlatching kit installed with the actuating button situated on the dashboard where it would be within easy reach of the driver. ●

And so that leaves us with three states yet to go; Vermont, Arizona and Tennessee. Come on, you guys, you can represent your home state if you'll rush us off a group of photos of your Rod or Custom — now!



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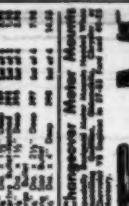
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secrets of showmanship

continued from p. 49

stand out far above any of the other cars at the show. On the ground, Eddie Ducazau of Gardena, Calif., owner of the car, had spread a special custom-made Naugahyde "blanket" which even had little pads for the white sidewall tires to rest on.

With the car in position, the job of laying out the Naugahyde tool kit at the back, snapping the passenger compartment tonneau cover in position, and placing the crash helmet just behind the steering wheel, and giving the entire car a final rub-down of spit and polish consumes a total of three hours on the average, using a two-to-four manpower team.

Is it worth it? Well, let's say such careful preparation really pays off, for Eddie has won 10 trophies at 10 shows at which the car has been shown. Seven of these were first-place prizes, one was for runner-up sweepstakes, while still another was for best appearing car at the show.

The car itself is a modified '31 Ford Model A roadster, with a Model A pickup bed installed. The white pleated Naugahyde upholstery, trimmed in red throughout, was done by Rip's Top Shop in Gardena. All chromework was accomplished by Dave's Home of Chrome in Compton. All other modifications, including powerhousing of the engine and all body and mechanical alterations, was done by the owner over a two-year period. Eddie estimates that he has over \$2000 invested in the showpiece.

Built on a '32 frame with a 102-inch wheelbase, the engine is set back 18 inches. Front end is '46 Ford, steering rods '40, wishbones are adjustable, and Chrysler double-action shocks are mounted on front. All suspension members are completely chromed. The engine itself is a flathead '48 Merc, bored out 1/16 inch, stroked 1/4 inch. An Iskenderian 404 cam, Edelbrock heads and manifold — all chromed — should make this rod a real draggin' machine.

Eddie doesn't go in for much of that, though, he confesses he built the car for show and kicks. ●

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CUSTOM

top banana

continued from p. 55

Top Banana rides on reinforced aluminum rails. The front axle is a tubular Ford with 16-inch wheels steered by a Franklin box. Tires are 7.10 x 16 Indys forward and 6.00 x 15 slicks aft. Torque is pumped through a Lincoln box to a 4:11, unlocked '34 rear end. The aft skins are used in applying retardation - rear wheel brakes only, that is.

Engine mounts, splines, fuel fittings and related controls are set up to permit a quick and easy swap between the two engines that the car runs; a fuel powered Merc and a gas burning Chevy. In fifteen minutes at the strip, Top Banana can be converted from one class to another.

Hank's Merc is a 298-incher atop which perch three Stromberg 97's converted for fuel - 85% worth. Manifolding is by Navarro. A set of Forged-True pistons travel $4\frac{1}{4}$ " within the 3% -size bore while an Iskenderian cam and an H & C magneto coordinate admittance of fuel and fire respectively.

George Santos' Chevy comes close to the Merc in output - despite its dependence upon gasoline for power - and is a real lively performer. It carries a 3% bore and has a $\frac{1}{4}$ " longer stroke than a stocker. Too, it carries three 97's which feed through tulipied Corvette valves which are actuated by one of Chuck Potvin's Eliminator cams. The mag for the Chev is a Scintilla. Both twirl Schiefer aluminum flywheels for quick acceleration.

Some time after the car was built and had made a good many runs, the healthy little Chevy was tried on a 75% fuel mixture. Result? 142.00 mph with an e.t. of 10.06 secs. That was at Half Moon Bay drag strip. During a top eliminator run with famed Jazzy Nelson, Top Banana tied with Nelson's rig for a speed of 135 and 10.28 e.t.

At Lodi a speed of 144.00 was turned up with an e.t. of 10.52 secs. What the future holds for Vincent's screamer can only be guessed; but its a pretty safe bet that whoever provides the competition, you can look for Hank to be Top Banana. ●

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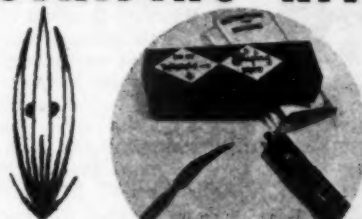
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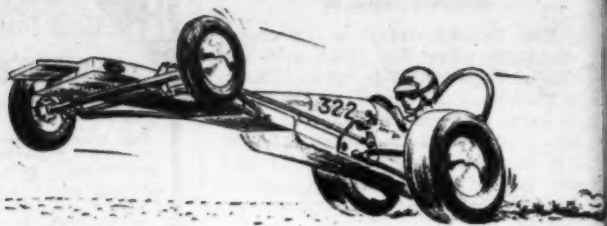
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TWO THINGS happened last August to prove that Bonneville Streamliner enthusiasts are on the wrong track. One was the new two-way Class E record of 266.20 mph, set with the famous three-engine Kenz & Leslie streamliner. The other was the astonishing average of 245.1 mph that was reached by a 91-cu. in. British M.G. special the week before.

What does the Kenz record prove? It proves simply that the "classic" Bonneville hot rod streamliner, as we know it today, is too big, heavy—and the body shape is wrong. The drag figures are rising at an impossible rate in the 250-mph range. The Kenz car, for example, was tested several years ago on one engine, and it did 186 mph. In 1953 it set a record of 255 mph on two engines. Last year it hit 261 on three, burning pure methanol. This year they averaged their 266 mph with a healthy nitro load. In other words, it cost them some 300 horsepower to buy that last 11 mph of speed! At this rate it would take over 1000 horses to do 300 mph.

So along comes the little M.G. and hits 245 mph with 275 hp. Their secret was a very small, light car of minimum frontal area, and with a new body shape—a kind of flattened torpedo shape, with deeply-rounded sides and no bulges over the wheels. It was a far cry from the typical Bonneville streamliner body, with its more or less flat sides and high bulges for wheels and cockpit. The drag coefficient of the new shape is 'way below that of cars like the Kenz, Shadoff, SoCal, etc. This is what we've got to have to get that 300 mph.

Frontal area and weight have got to be cut, too. We can never hope to equal the dimensions of the M.G. with a big Chrysler engine...but this jazz about two and three engines has got to go. If we develop a decent body shape around a reasonably light, compact chassis, we can hit our 300 mph with an honest 550-600 hp (or that would be equivalent to around 700 hp at sea level). We can get this with one big Detroit engine...IF we apply the *supercharging* principles properly. The M.G. people got over 300 hp from their 91-cu. in. with 32 lbs./sq. in. boost pressure. Surely we can get 700 horses from a 400+ cu. in. Chrysler on 15-20 lbs. pressure. The exhaust-driven turbocharger may be the answer. This develops its pressure with very little drain on useful engine power.

At any rate, the day of the big 3000-4000 lb. multi-engine Bonneville streamliner is over. The smaller, lighter, cleaner car with a highly-supercharged engine is the answer for 300 mph. •

LOOK AT THIS LINEUP! If you thought the previous issues of **HOT ROD ANNUAL** were good, wait till you see the new one!



1953



1954



1955



1956



1957

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